Textile Industries

Formerly "COTTON"

a W. R. C. Smith publication

FEBRUARY, 1955

Highlights

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A special section—contains 66 short, easy-to-read articles telling how modern equipment and methods are enabling mills to save labor, simplify jobs, reduce waste, improve quality, increase production.

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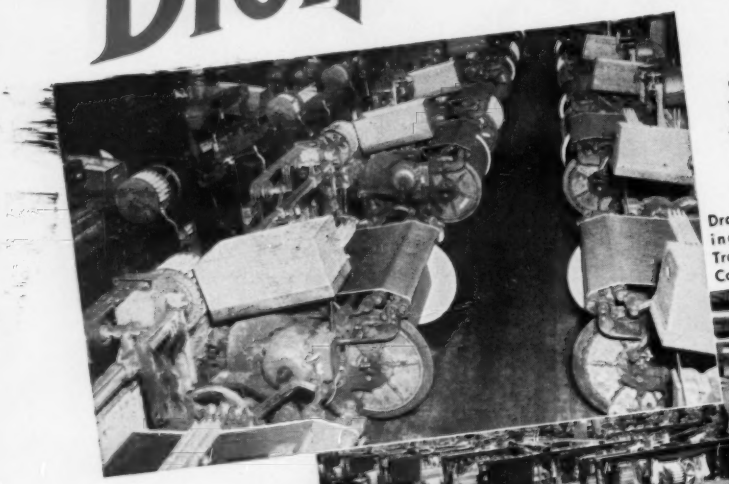
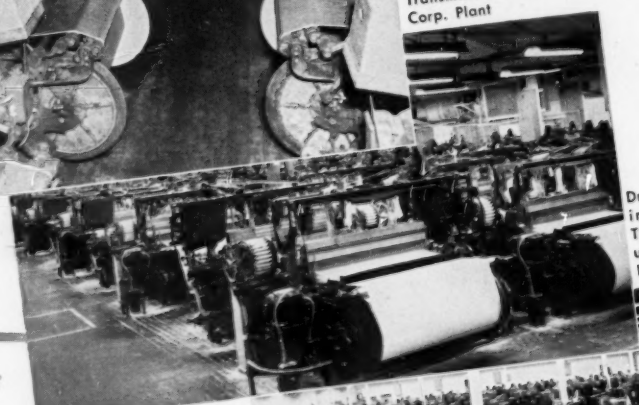


Draper X2 looms operating with Diehl Power Transmitters in Cone Mills Corp. Plant



Draper XD looms operating with Diehl Power Transmitters at Bibb Manufacturing Company, Columbus, Georgia.

Draper XD looms operating with Diehl Power Transmitters at the Lyons Plant, Synthetic Division, M. Lowenstein and Sons.

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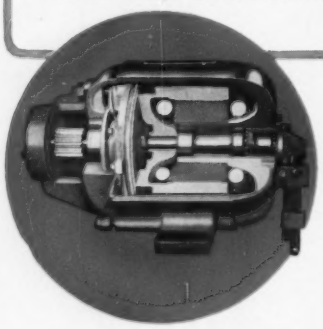

This cutaway view illustrates the inverted construction of the power transmitter and shows the rotor which revolves around the outside of the stator on a hollow shaft—providing the essential inertia without the disadvantages of a separate fly wheel. Note the pinion driving shaft with attached clutch-plate which is shifted axially by simple lever at front end of motor, regulating clutch engagement pressure and providing controlled driving and braking action.

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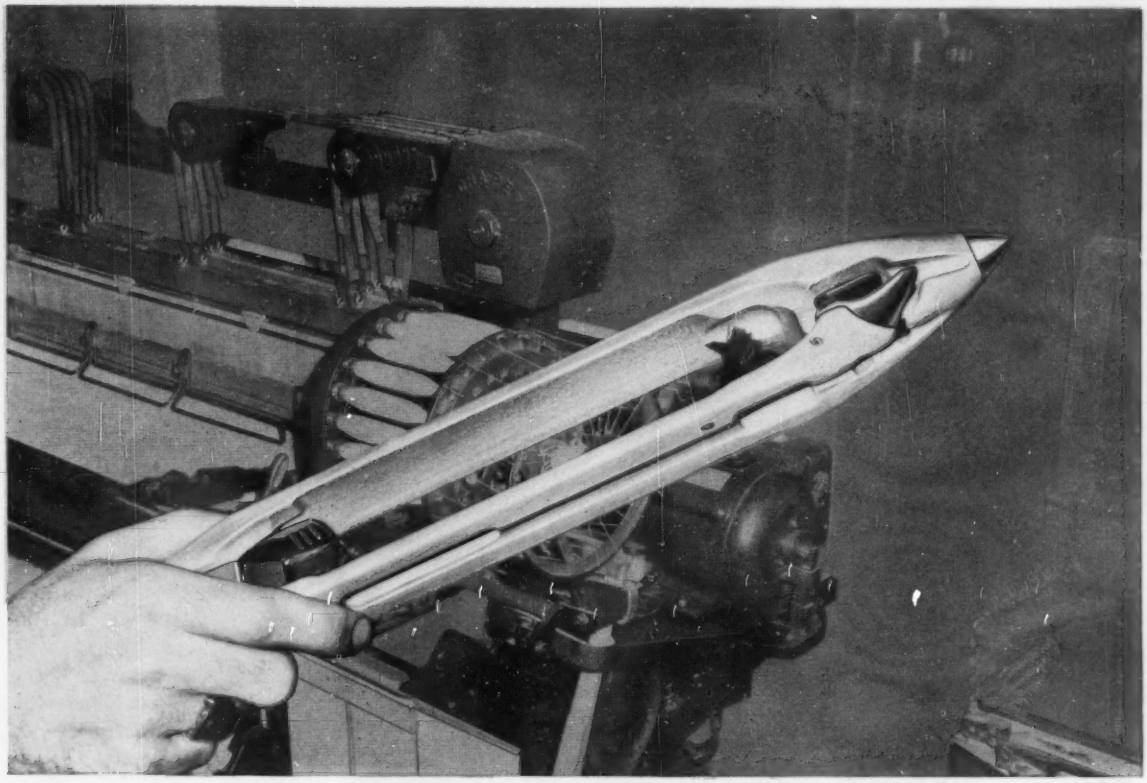

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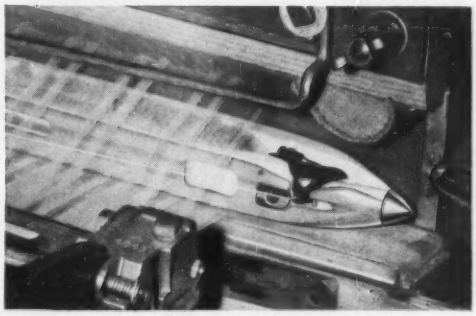

Strobolite photograph of Draper True Flight shuttle in action.

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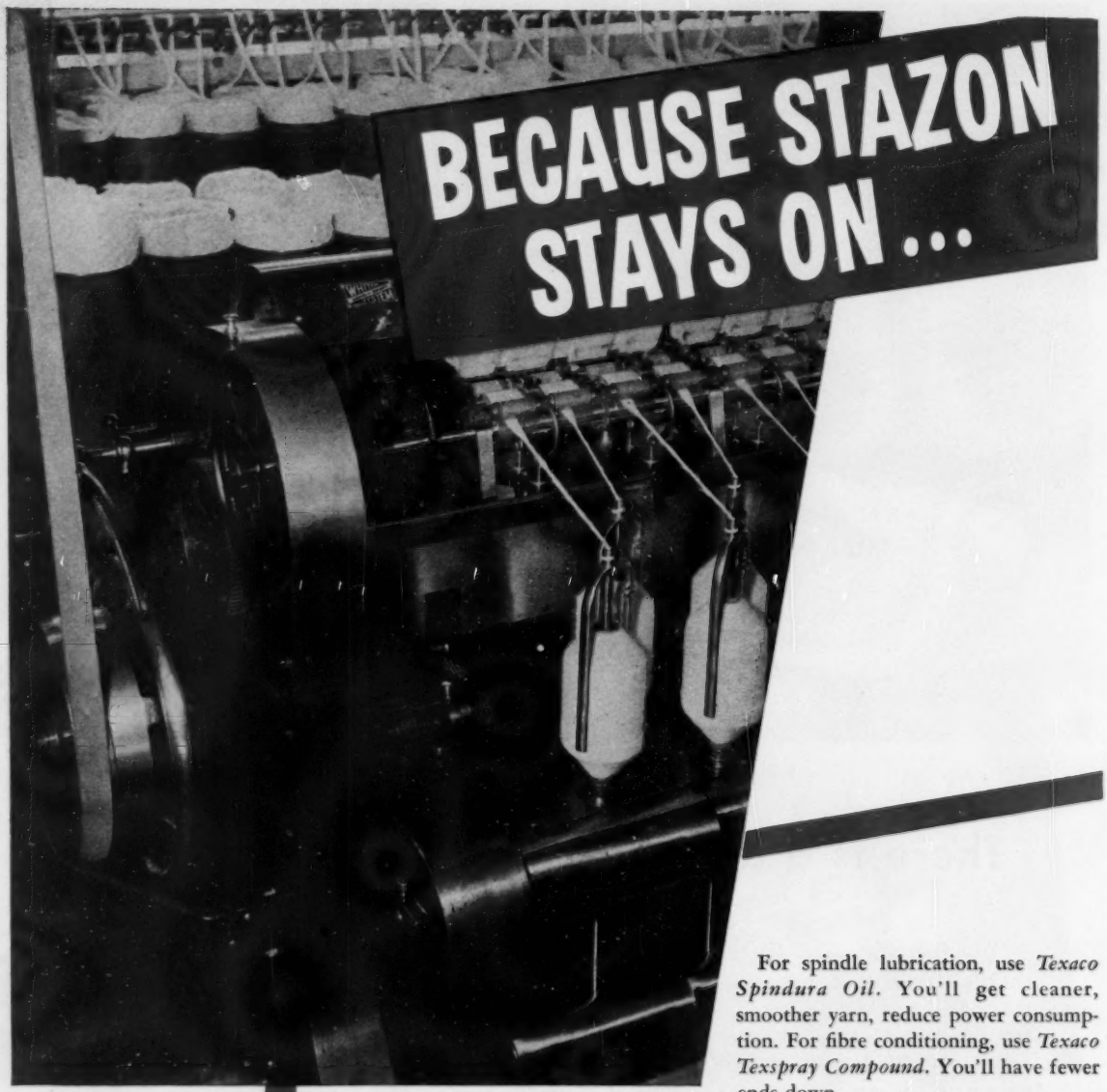

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Textile Industries

Formerly "COTTON"

Vol. 119, No. 2
February, 1955

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Convolute and Spiral Wound Cloth Tubes

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Cloth Winding and Baling Boards

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Shorts and Remnants

► If any of our good textile friends fail to share our optimistic view of the industry for 1955 and for good, they may take a tip from H. L. Canup of Troy, N. C., who writes to know how much an ad would cost to offer for sale: "One or two Crompton & Knowles 'Super Silk' . . . looms . . . some 20/1 ply cotton yarns . . . Also one Universal Winder 20-spindle unit. Have been running them in my basement, but need the room now."

► The letterhead says "Canup Chinchilla Ranch," and has a picture of a couple of those animals who apparently are spreading out to occupy the basement something like rabbits. We read somewhere that chinchilla raising is in a bad slump, so maybe somebody in that field will move them out of his basement and write Mr. Canup and become a textile manufacturer.

► But Mr. Canup at least has his ranch, and according to "National Buyers' Guide" magazine, A. R. Boswell of Berkeley, California, writes, "I am interested in raising ladybugs." That's old S&R—never a dull moment from Chinchilla to ladybugs who as we recall it "fly away home—your house is on fire and your children are all alone." Anyway if you don't want to buy any chinchillas, C&K looms, Universal winders, cotton yarn, maybe you have a good ladybug business for sale or have a friend who does. P.S. The "National Buyers Guide" is in California too—Los Angeles.

► And, while we are on the subject of animals, look at this picture that old S&R got in the mails:

What this has to do with textiles, we don't know, but that collar is not just

	Mechanical Stability in Seconds	ACID-SALT TOLERANCE IN C.C. PER 100 PARTS LATEX SOLIDS				
		NA_2SO_3, 10%	HCl, 10%	H_2SO_4, 50%	NaCl, 10%	CH_3COOH, 50%
CHEMIGUM Latex 235 CHS	300+	500+	84	78	500+	500+
CHEMIGUM Latex 245 CHS	300+	500+	88	80	500+	500+
Latex "A"	1	82	27	40	58	9
Latex "B"	14	352	20	20	40	500+
Latex "C"	3	44	8	8	24	19

CRITICAL TEST of latex mechanical stability—as described in RFC Rubber Reserve Division Report SP-T 153—shows CHEMIGUM Latex is superior to similar latices as indicated by the data.

GREATER STABILITY MAKES IT EASIER

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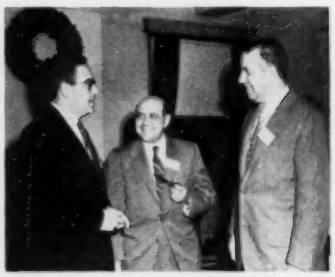
Shorts and Remnants

a dog collar—huh uh—it's a K-9 Guardian Collar—rids dogs of fleas forever. Progress—that's what it is and we always thought "The Fleas Go With The Dog."

► Speaking of gadgets for dogs—some like magazines. Here's one that favors TI:

Last time our New York advertising man, William K. Hoffman, sent us a picture, his dog had on glasses and we thought that was silly. Why should any dog need glasses to read TEXTILE INDUSTRIES?

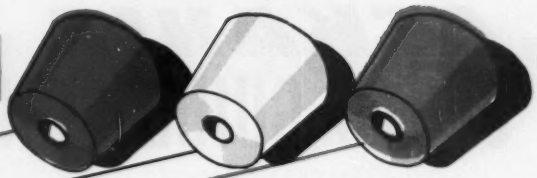
► And speaking of New York representatives, we should head this next picture "Grippers or Zippers, TEXTILE INDUSTRIES right there," for

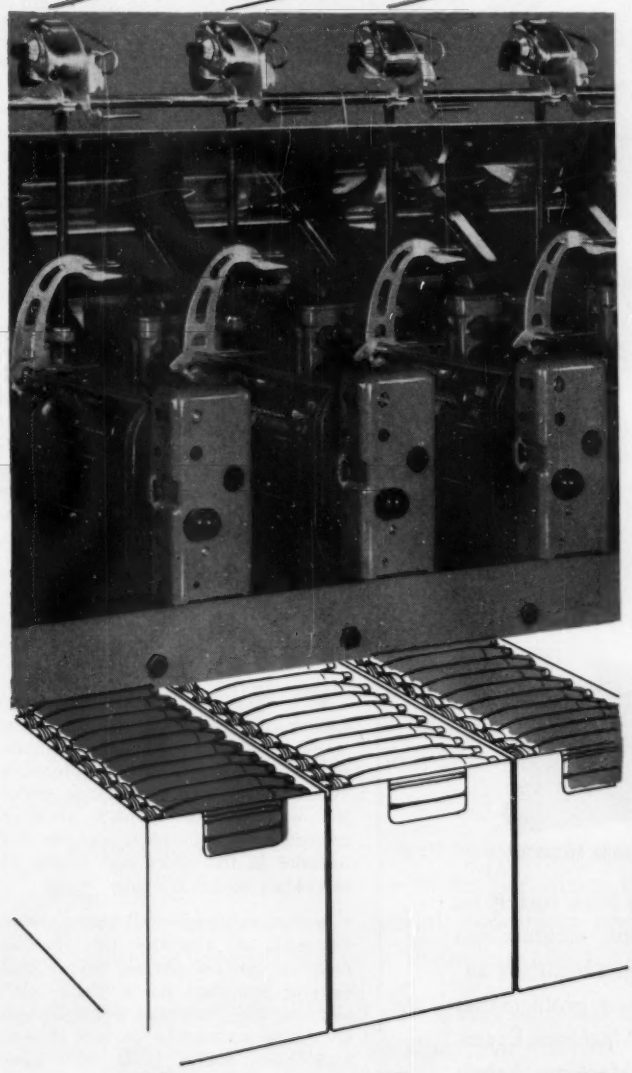


here is our own Yankee Editor, Leon Seidel (center) pictured at an apparel trade press meeting with Roger W. Hall (left), sales promotion manager, and H. David Ward (right), sales manager, respectively of "Gripper" Snap Fasteners, Scovill Manufacturing Company.

► If you followed the discussion on cotton, wool, and man-made fibers last month you may be interested in a recent editorial in "The Atlanta Constitution" on growth of sheep raising in Georgia. [Here we go on animals again—this must be "S&R Loves Animals Month."] In

AUTOCOPSER





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***ONE HUNDRED* STYLES TOMORROW . .**

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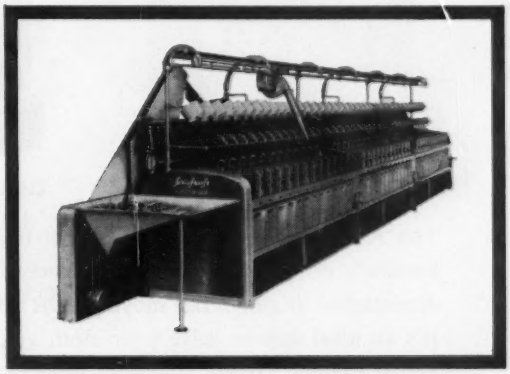

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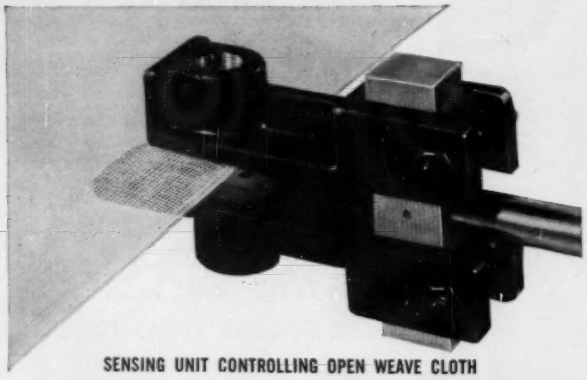
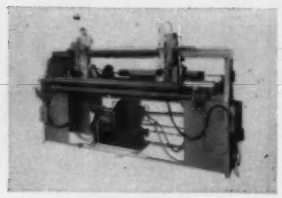


SENSING UNIT CONTROLLING OPEN WEAVE CLOTH



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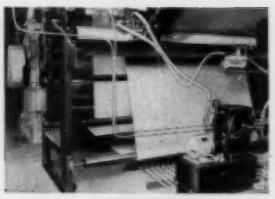

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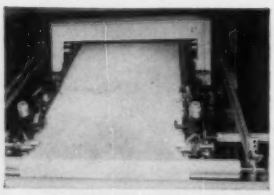

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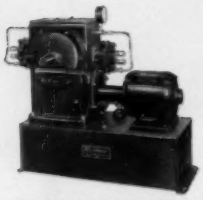

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The Askania Cloth Guide Control has been tested on hundreds of applications—it's extremely fast, accurate and dependable. It guides fast moving webs with a breath of air. It's an ideal unit to solve your cloth guiding problems on Tenter Frames, Tubing Machines, Folding Machines, Examining Machines, Printing Machines, Slitting Machines, Labeling Machines or Rewinding Machines. Askania Cloth Guide Controls are establishing new standards in the finishing departments of hundreds of Textile Mills. If you have a cloth guiding problem—ask for Bulletin A-161, or call Askania engineers for full details.

ASKANIA REGULATOR COMPANY
260 E. Ontario Street, Chicago, Illinois
Subsidiary of General Precision Equipment Corp.

Shorts and Remnants

part it said:

> ". . . Time was when sheep were familiar sights on Georgia farms, and ranged the valleys and cleared places in the northern mountains. Many a prosperous cotton mill began as a woolen mill, spinning local fibers, and converted to cotton when sheep raising died out. . . ."

► If the guy who wrote that can name *one* prosperous cotton mill that started as a woolen mill using local fiber we will eat crow. It's hard enough to find a prosperous rayon or nylon plant that started as a silk mill. Remember when rayon was a "synthetic silk." Now we even have "synthetic synthetics."

► On the train from New York we told a cotton mill friend of ours about the articles on fibers [special color section in TI for January, 1955] and he said it was a good idea. His boys in the mills saw so much rayon advertising [in TEXTILE INDUSTRIES naturally] that they kept after him to try some and now he's running more and more mixtures. Selling them, too.

► Funny thing—the silk boys didn't like rayon and look at it now, and look at the other synthetics. It's a big industry and lots of changes—more and more coming.

► A French fashion house has brought out the "Crying Shoe" for women. With pumps, sports shoes, and modern shoes with top-pieces, a "voice" is sewn in or stuck on under the upper-leather, which gives a screeching sound when anyone (for instance in the street car) treads on the lady's foot.

► You can never tell about tastes. Old S&R has a brother who used to pass up the hot coffee, bacon, and eggs at breakfast for a "Coca-Cola" and crackers. Now that would change an entire marketing picture if that took hold. S&R's good wife likes catsup, even on pancakes—what would happen to molasses and the good old Vermont Maple Syrup boys if everybody felt this way.

► We used to tell the story of a Scandanavian restaurant in Minneapolis where we noted crowds drinking a funny pink drink and our friend, the then ad manager of Minneapolis-Honeywell, got up nerve enough to ask what the concoction was? "Catsup in their beer," was the

TRITON GR-5

THIS NEW WETTING AGENT

ALSO GIVES YOU HIGHLY

EFFECTIVE REWETTING

EVEN AFTER PROLONGED

FABRIC STORAGE

TRITON GR-5 is not only soluble in water in all proportions but is stable—particularly to lime and magnesium salts—and electrolytes. And TRITON GR-5 is economical, too. But that's only half the story.

TRITON GR-5 is an excellent *rewetting* agent. It wets back after it has dried into the fabric, permitting high absorption under normally difficult conditions, and maintaining fabric absorbency through prolonged storage.

What's more, TRITON GR-5 puts a real sales feature into towelings. They are extra absorbent *when new*—don't need usual pre-use washings housewives complain about.

CONSIDER THE SPECIAL FEATURES OF THIS ECONOMICAL NEW WETTING-REWETTING AGENT; THEN CALL YOUR NEAREST ROHM & HAAS OFFICE.

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

TRITON *is a trade-mark, Reg. U.S. Pat. Off. and in principal foreign countries.*

with **BIJUR** AUTOMATIC LUBRICATION

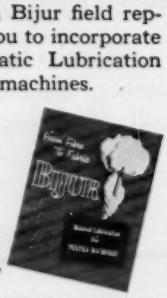
"INCREASED production, big cuts in repair costs and maintenance man-hours" — You'll hear this from mill men who have switched to Bijur automatic lubrication.

Poor lubrication causes most textile machinery breakdowns. Bijur Automatic Lubrication licks the problem of undue bearing wear. It supplies, automatically, the correct amount of filtered oil at pre-determined intervals. Unlike the fellow who handles the oil can, the Bijur System never forgets a bearing. There are no inaccessible bearings when you use the Bijur System.

Machines are lubricated while running which eliminates downtime for oiling and avoids injuries to workers. You save up to 50% on oil consumption. There's no excess oil to splatter and spoil materials and cause fire hazards.

With all these impressive benefits, it's time to discard hit and miss hand oiling. Let a Bijur field representative help you to incorporate the Bijur Automatic Lubrication System into your machines.

Colorful, new bulletin, "From Fibre to Fabric," shows the practical benefits that Bijur Automatic Lubrication offers to the Textile Industry. Write for your copy.



BIJUR
LUBRICATING CORPORATION
Rochelle Park, New Jersey

Pioneers in Automatic Lubrication

1033

Shorts and Remnants

reply. We got plenty of mileage on this one until one night in southern Illinois another friend said "What's funny about that—tomato juice and gin is the #1 drink down here." And then we saw a diner at an airport restaurant in North Carolina reach for the catsup bottle to pour over his ice cream, so we say "everybody to his own taste."

► Did you hear about the old maid who asked Santa Claus to make this past season a "Marry Christmas."

► The return cards in our booklet page continue to come in. If you haven't used this lately, why don't you look it up in this issue. Don't wait until 1960 as did CYMA ACKER MAN of CMS Textiles, 155 W. 20th St., New York, who sends in a card from May, 1948.

► There's also one from Dave Zeidan, Beirut, Lebanon, who wants prices on Supreme knitting machines. In fact knitting mill inquiries are more numerous than usual, including one from Jenkins Mills, Philadelphia, for prices on Smith Drum rotary dyeing machines [same city—maybe the phone service is lousy]. An engineer in Yonkers, New York, wants samples of Arrow latch needles.

► OK—keep sending in the cards. If you don't see it, ask for it.

► Walter Mitchell, V. P., Draper Corporation, Spartanburg, S. C., is interested in a machinery table, state by state, as published in *Textile Industries News* [copy upon request]. He questions our figure of 31,516,770 spindles in the U.S.A. as he was under the impression that there are about 23 million cotton spindles in place today. But, Walter, those are not just cotton spindles—there are others you know—woolen and worsted, rayon, nylon, Dacron, dynel, Vicara, Acrilan, Arnel, Fiberglas and others depending upon when this gets in print. TEXTILE INDUSTRIES covers them all including twisting and throwing as well as spinning [all included in above figure].

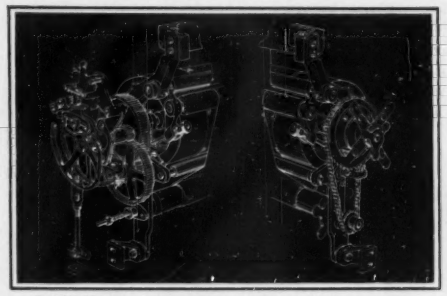
Binding Back Issues

"After subscribing to the above periodical [TEXTILE INDUSTRIES, of course] since 1947, we have now decided to have these volumes bound. Unfortunately, many of the indexes

No.4 in a series explaining

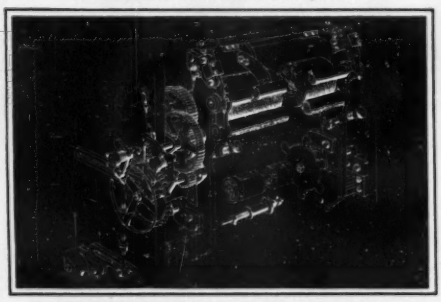
Why C&K's New Multi-Purpose Looms mean More Profit to any mill

Regardless of the type of M-P Loom you buy, C&K offers a type of takeup which is suitable for the fabrics you will weave. These include:



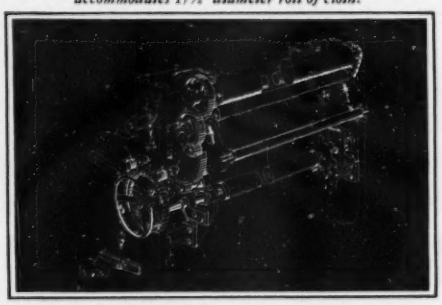
1. SILK: The so-called silk ratchet-driven takeup is normally used in producing high-pick filament and silk fabrics of finest texture.

31½" circumference takeup roll. Winding-up roll accommodates 11¾" diameter roll of cloth.



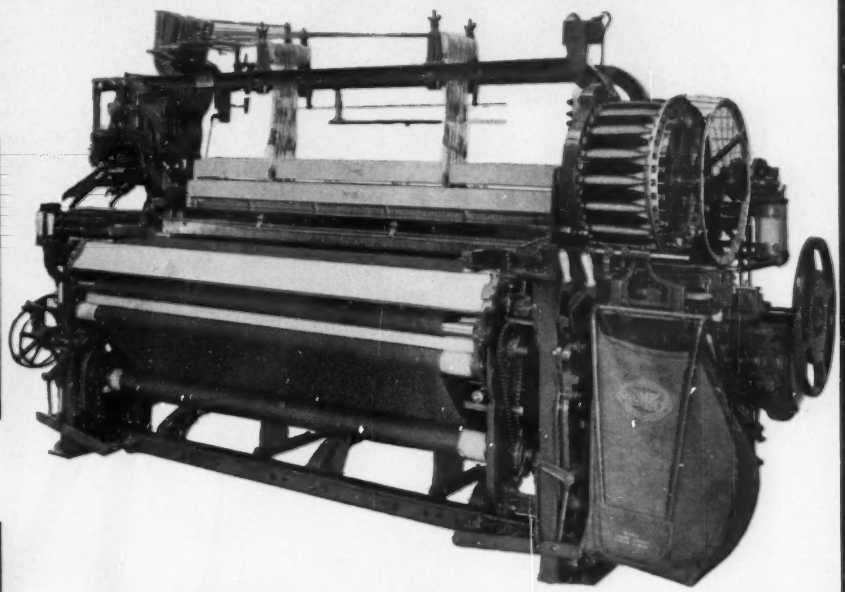
2. LOW ROLL: The low-roll ratchet-driven takeup is normally used in the medium pick range for fabrics such as cottons, blends and coarser synthetics.

20" circumference takeup roll. Winding-up roll accommodates 17½" diameter roll of cloth.



3. ALL PURPOSE: The all-purpose takeup is either of the positive reverse worm or ratchet-driven type, depending on the shedding mechanism and weaving requirements. This type of takeup is normally used for blends, woolens, worsteds and fabrics requiring a heavy beat-up.

15¾" circumference takeup roll. Winding-up roll accommodates 17½" diameter roll of cloth.



What is more, any one of these three takeups can be replaced by either one of the other two at a later date, with minimum effort and expense, if style trends make it advisable. This is another exclusive feature of C&K's new M-P Looms, as shown in the check chart.

So see C&K *without delay* for the exact type of M-P Looms best suited to *your* operation.

THESE NEW M-P FEATURES CONTRIBUTE→TO THESE PROFIT FACTORS

	Better Quality	Increased Work Assignments	Increased Production (Speed X Efficiency)	Lower Maintenance	Versatility
Rotary Magazine: For single color, or for multiple-color work (up to 4).	✓	✓	✓	✓	✓
Scissors Thread Cutter	✓	✓	✓	✓	✓
Vacuum Filling Control	✓	✓	✓	✓	✓
Cone Picking		✓	✓	✓	✓
More Rugged Basic Frame: Common to all M-P Looms.		✓	✓		✓
Letoffs: New composite type. Also other standard and special types.		✓	✓	✓	
Takeups: All purpose, silk, or lower winding roll.	✓	✓		✓	✓
Lay: Precision-built and convertible — 1x1, 2x1, 4x1, 4x2, and 4x4	✓			✓	
Shedding Mechanisms: Knowles Head — 25 Harness, 4/10" Space Knowles Head — 20 Harness, 1/2" Space Dobby — 20 Harness, 15/32" Gauge Undercam Jacquard	✓	✓	✓	✓	✓
Feelers: As required.	✓	✓	✓	✓	✓
Driving & Shipping	✓	✓	✓		✓
PRECISION, STRENGTH, SIMPLICITY Throughout Every M-P Loom	✓	✓	✓	✓	

Crompton & Knowles
LOOM WORKS
WORCESTER 1, MASSACHUSETTS, U. S. A.

Charlotte, N. C. • Philadelphia, Pa. • Allentown, Pa.
Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.
Crompton & Knowles of Canada Limited, Montreal, Quebec

WILL PUT NEW LIFE IN YOUR PRODUCT

The NEW Nylon Staple by IRC presents a list of exciting new properties. To creative industrialists in every field it means a new beginning in product development and improvement.

You can expect this NEW Nylon Staple by IRC to give you the same cost-cutting uniformity and performance that industry depends on with IRC rayon yarns.

Nylon Staple

- NEW LUSTER
- NEW CRIMP
- NEW DYEABILITY
- NEW ABRASION CHARACTERISTICS
- NEW RESILIENCY WITH LESS CRUSHABILITY
- NEW STRENGTH

... NEW ECONOMY FOR YOU

...BRING NEW PRODUCTS TO LIFE!

I·R·C Industrial Rayon Corporation

Sales Offices: 500 Fifth Avenue, New York 36, N. Y. • 627 Guilford Bldg., Greensboro, N. C.

FOR ONE THING—

folks' feet *feel* better

Floor of Northern Hard Maple in Greenville, S. C., plant of Judson Mills, division of Cotwool Mfg. Corp., Wilmington, Del., makers of dotted Swisses, lawns, ginghams and rayon and cotton fabrics.

ON A FLOOR OF foot-friendly NORTHERN HARD MAPLE

Foot-comfort isn't *everything* in a mill floor, of course. But you *do* get it in resilient, smooth, Northern Hard Maple. And with the unsurpassed *comfort*, Maple pays lifelong dividends of easy, brush-and-broom cleaning, low-cost maintenance, simple and swift refinishing. It fights traffic wear—scraping and scuffing and denting. It creates no dust or lint, and "there's always a new floor underneath." We're sure these are the reasons why Judson Mills chose MFMA-warranted Northern Hard Maple, as have so many other textile operators. MFMA inspection and grading care is maintained to everlastingly guard and justify your valued high opinion of "the finest floor that grows."

MAPLE FLOORING MANUFACTURERS ASSOCIATION
Suite 591, Pure Oil Bldg., 35 E. Wacker Drive
Chicago 1, Illinois

FLOOR WITH NORTHERN HARD MAPLE BEECH AND BIRCH

Shorts and Remnants

appear to have gone astray, and we would be most grateful if you would kindly let us have additional copies of indexes for all volumes from 1947 to the present date."

T.M.M. (RESEARCH) LIMITED
Helmshore, Rossendale, England

► Glad to oblige.

" . . . We are in need of TEXTILE INDUSTRIES, 1939-1953. . . . "

C. V. SWETS & ZEITLINGER
Amsterdam, Holland

► Anybody want to sell fourteen bound volumes of TEXTILE INDUSTRIES?

Spinners Spin, Cleaners Clean

"We shall be much obliged if you can supply us with two sets of photographs that you illustrated in your very good article entitled "Spinners Spin, Cleaners Clean" [TI Sept. '54]. If you are unable to send us the photographs will you please send us 6 (six) reprints of the article referred to. . . . "

F. B. MARTINS
Cia Nac. Tec. Nova America
Rio de Janeiro, Brazil, S.A.

► To our good friends at Nova America 2 copies and permission to reprint.

Wants Printing Machines

"We are trying to locate a manufacturer of textile printing machinery. As publisher of TEXTILE INDUSTRIES, perhaps you can put us in touch with one or more concerns that manufacture a printing machine to do printing similar to the sample enclosed."

H. A. BERNS
M. Snower & Company
Chicago, Ill.

► We sent samples to H. W. Butterworth & Sons Company.

"Textile Industries" Reaches Them

"You will be pleased to learn that ——— —— ——— is presently contemplating including your organization in our advertising schedule for 1955. . . . I believe that you folks reach the type of personnel with whom we often do business. . . . "

NAME WITHHELD

► That's correct if you mean the personnel who buy and select machinery, equipment, and supplies; we not only reach them—they read TEXTILE INDUSTRIES.

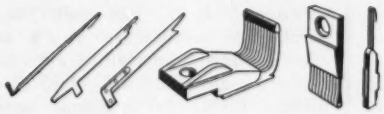
STRENGTH YOU CAN COUNT ON . . .

Today's high speed knitting machines demand Textile Spring-Beard Needles . . . for these needles keep their strength, resiliency and temper, day-in and day-out. The strength and stamina of Textile Wire Products are developed through a special steel formula, special tempering, and electronically controlled manufacture . . . Textile Spring-Beard Needles will help your full-fashioned machines stay young and produce more "firsts".

TEXTILE MACHINE WORKS, READING, PENNA.

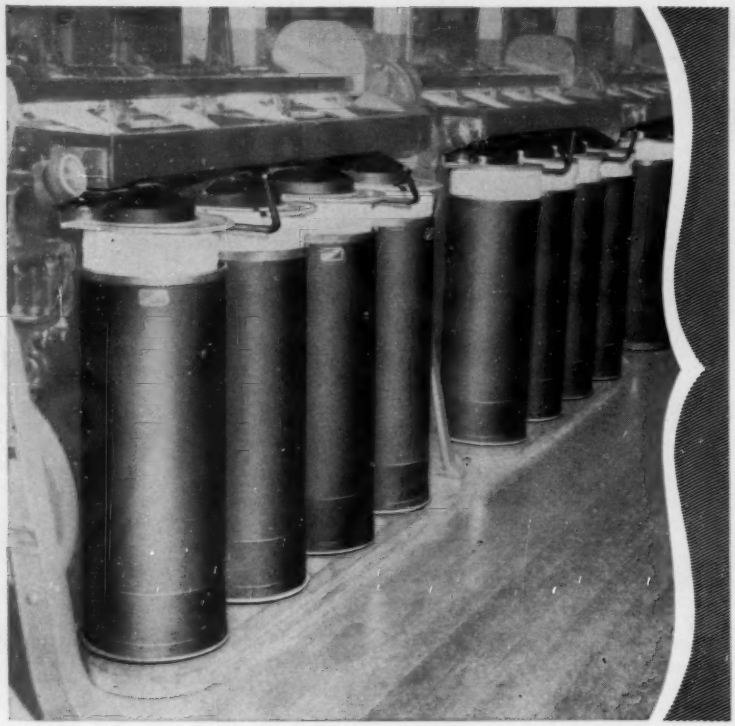
Textile

SPRING-BEARD NEEDLES



Wire Products Division

TEXTILE MACHINE WORKS, READING, PENNA.



HOW SOUTHERN STATES COMPLETE COILERS AND CONVERSION UNITS CUT CARD ROOM OPERATING COST

Mill case histories prove over and over that Southern States coiler conversions pay for themselves in less than a year!

Adding up to lower operating costs and savings you can see are—larger cans with increased capacity . . . renewed life of old coilers, longer life of new coilers . . . lower maintenance costs . . . smaller parts inventories . . . simplified, more efficient handling . . . plus improved quality.

Recognizing that each mill is faced with different problems, Southern States has produced the most complete line of coiler and coiler conversion units available to the industry. Thus, regardless of sliver handling methods, or condition of existing equipment, Southern States makes it possible for your mill to enjoy all the advantages of larger cans at a price you can afford.

Complete details are in our Bulletin 201, which we'll send on your request. Better still, let our representative show how Southern States conversions can cut your card room costs.

SS®

SOUTHERN STATES

EQUIPMENT CORP.

HAMPTON, GEORGIA

What the TEXTILE MILLS are doing

Last December 2,008 production and maintenance employees of **Adams-Millis Corp.** plants in Kernersville, High Point, and Tryon, N. C., received Christmas vacation pay checks totaling $74,895.86. Employees with a year or more of continuous service shared according to length of service and annual earnings. Twice a year Adams-Millis issues vacation pay checks. Checks totaling $73,034.78 were paid to employees in these plants last June.

Arlin Mfg. Co. is a new firm in Lowell, Mass., producing "Arlin," a highly reflective decorative yarn for use by the textile industry in making fabrics for drapes, upholstery, dresses, jackets, etc. This yarn is reported to have exceptionally high tensile strength, abrasion resistance, and

Mr. Mitchell (left) shows "Arlin" to Earl F. Cook, executive director of the Lowell Development and Industrial Commission.

chemical inertness; thermal stability is said to be outstanding. John R. Mitchell, formerly with Du Pont, heads the company.

Barclay Yarn & Textile Co., Inc., Pawtucket, R. I., has been incorporated to manufacture rayon and other yarns and specialties. Jeremiah J. Gorin, 261 Williston Way, Pawtucket, R. I., is principal incorporator and representative.

It was recently reported that a new firm, **Broadway Dye Works,** will begin operations soon in Passaic, N. J., at the former Hollywood Piece Dye

Works plant. E. Stafnacci, formerly vice-president of the Hollywood concern, is said to be an official of the new wet processing organization.

William W. LeVeen and Edward P. LeVeen, Jr., of the Carleton Woolen Mills, Rochdale, Mass., have purchased the real estate, machinery, and equipment of **Wilton (Me.) Woolen Co.'s** Winthrop, Me., plant. Some new equipment has been ordered, and modernization of the three-story plant, which produces washable woolens for the sportswear and coat trades, is planned.

A new plant in Thomaston, Ga., is planned by **William Carter Co.,** knitwear manufacturer, home office of which is in Needham Heights, Mass. According to Lyndall F. Carter, first vice-president of the company, training of the 300 operatives for the plant will start during the early part of 1955.

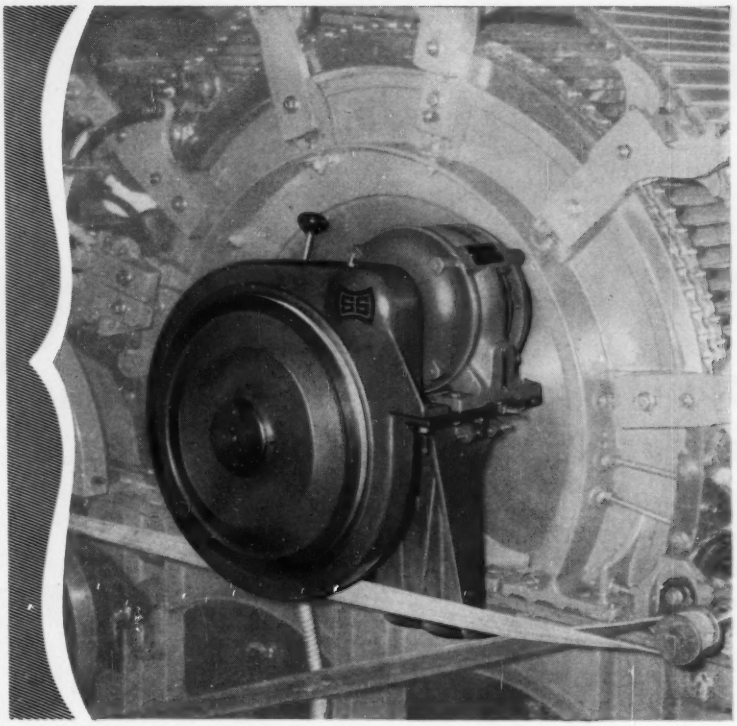
The **Cluett, Peabody & Co., Inc.,** cotton mill in Grosvenor Dale, Conn., has been purchased by Republic Textile Equipment Co., according to a report. The new owner contemplates continuing operation of at least a part of the mill.

A new denim manufacturing plant containing 42,000 spindles and 1,080 looms is being constructed by **Cone Mills Corp.** two miles northwest of San Marcos, Texas. Approximately 25,000,000 yards of blue denim will be produced annually in the modern, one-story windowless plant which will contain approximately 600,000 sq ft of floor space and employ 1,100 people.

The Weldon, N. C., division of **C. R. Daniels, Inc.,** has been expanded to almost double its previous capacity so that all spinning and weaving operations of the company can be carried on there, providing more space in the Daniels, Md., plant for fabrication of baskets, trucks, tents, and other canvas specialties marketed by the company.

First place award in the South Carolina Textile Safety Contest went to **Drayton Mills,** Spartanburg, S. C., for completing some 3,500,000 man-hours without a lost time accident. Ernest Hudson, safety chairman, and Sam Nicholson, personnel director at Drayton, received the award on the occasion of the 17th annual South Carolina Accident Prevention Conference held in Spartanburg recently.

Because of "unreasonable" competition, Clarence V. Williams, presi-



SOUTHERN STATES MAKES POSSIBLE INDIVIDUAL CARD DRIVE BENEFITS WITHOUT CHANGES IN PROCEDURE

Your mill can enjoy the advantages of individual card drives *without changing carding or stripping procedures.* An EXCLUSIVE Southern States feature makes this possible. A standard-diameter grooved pulley, an integral part of the main drive, permits stripping in the usual manner. *No separate stripping device is needed.* The operation is simpler, quicker, and safer.

Important to cost-conscious mill men, the Southern States Individual Card Drive *meets both budget and operational requirements.* It is priced low enough to justify the elimination of card room lineshafting and belting with their inherent hazards and headaches.

It is a packaged unit, easily and quickly installed. Mounts direct to card frame. No complicated reduction unit or overhung load on cylinder shaft. Occupies about the same space as flat-belt drive. Leaves flats clear and eliminates danger of springing arches or damage to flats due to vibration.

Write for our Bulletin No. 200, or get the facts from your nearest Southern States representative.

SOUTHERN STATES
EQUIPMENT CORP.
HAMPTON, GEORGIA

No matter what you're running, natural or synthetic fibers...

Get maximum lap resistance

Whether you're spinning natural or synthetic fibers, Armstrong J-490 Cots will give you top-quality yarn and maximum lap resistance, particularly on frames equipped with revolving clearers. Here's why:

J-490 Accotex cots actually tend to repel broken ends because their special synthetic rubber compound contains certain electrolytes that neutralize the electrical attraction between cots and fibers. The illustrations on the opposite page show how this happens.

Fibers don't build up on the smooth surface of J-490 cots because the J-490 compound contains no fillers that can roughen the drafting surface. J-490 cots won't pull short fibers from the roving and cause excessive end breakage. The result is cleaner, more uniform yarn.

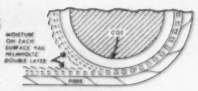
Of course, you'll get long service life with J-490 cots. Oils, dyes, and commonly used textile chemicals do not affect them. Re-buffing is seldom required more than once a year.

Send for booklet, "Armstrong Textile Roll Coverings and Mill Supplies." Gives suggestions on selection, installation, and maintenance of Armstrong Textile Products. Write Armstrong Cork Company, Industrial Division, 6502 Ivy Street, Lancaster, Pennsylvania.

Armstrong ACCOTEX COTS

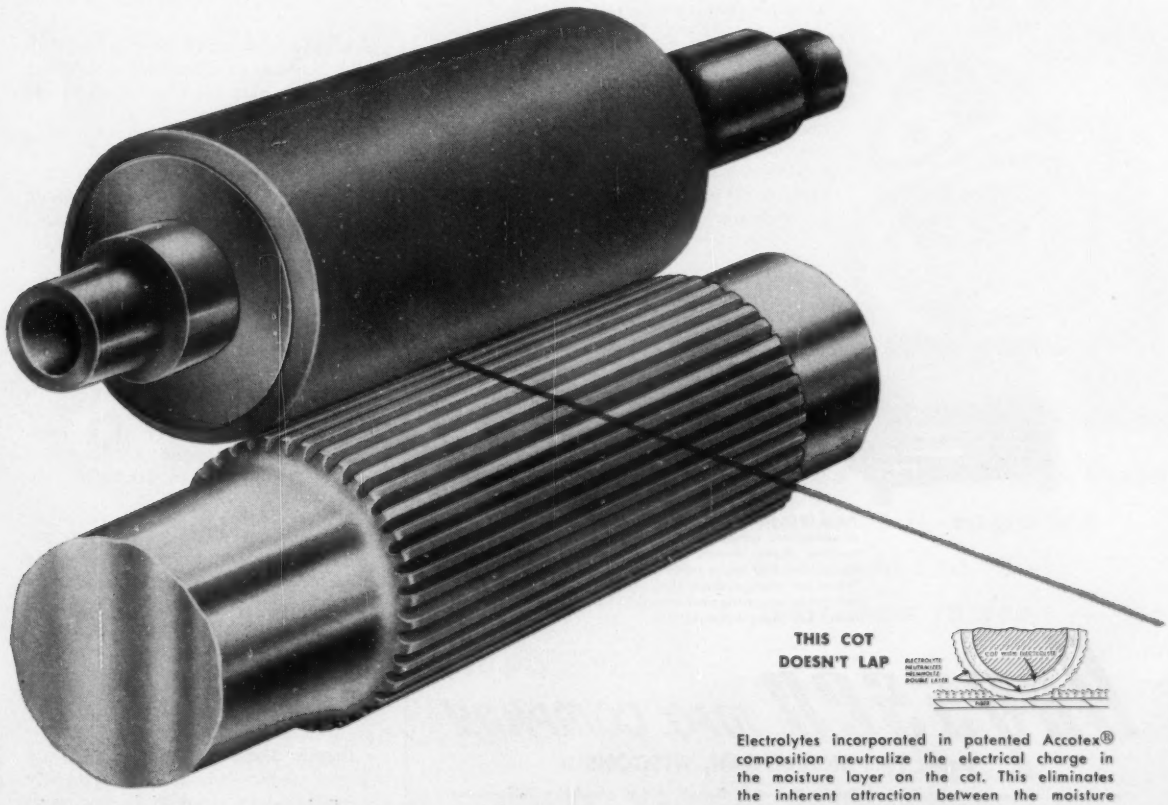
... used wherever performance counts

THIS COT LAPS



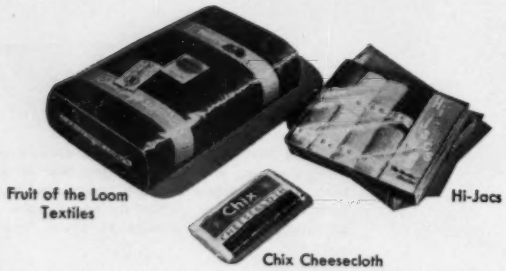
Moisture layers on fiber and cot contain electrical charges. When pressed together in spinning, these charged moisture layers tend to adhere to each other. When an end breaks, this attraction is strong enough to cause lapping.

with J-490 Accotex cots



THIS COT DOESN'T LAP

Electrolytes incorporated in patented Accotex® composition neutralize the electrical charge in the moisture layer on the cot. This eliminates the inherent attraction between the moisture layers. The cot actually tends to repel the fiber.



Fruit of the Loom Textiles

Hi-Jacs

Chix Cheesecloth

YOU CAN TELL A HAYSSEN-WRAPPED PACKAGE BY THE WRAPPING IT KEEPS!

easy, automatic operation

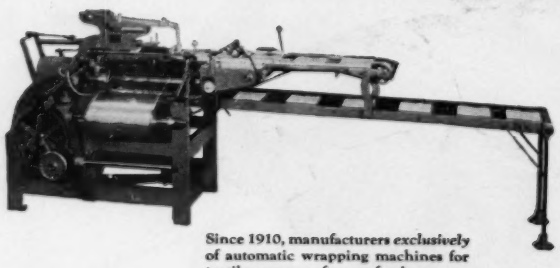
Regardless of size or shape, you get a neat, tight wrap on every package with a Hayssen automatic wrapping machine. *Wrapping's easier!* Also, production men report savings up to 80% over previous wrapping costs.

simple to adjust

No complicated adjustments from size-to-size on a Hayssen. No gears or sprockets to remove or change . . . no need for expensive mechanics to change size, either. So simple the operator does it on the job.

more sturdily built

Hayssen's simple, rugged design, using fewer moving parts, keeps these machines working and saving through years of dependable, trouble-free service. Every moving part is in the open and easily reached for maintenance and cleaning.



Since 1910, manufacturers *exclusively* of automatic wrapping machines for textiles, paper, frozen foods, meats, vegetables, and many other products. Whatever your product, Hayssen can solve your wrapping problem. WRITE today for more information.

Hayssen MFG. COMPANY

Dept. TI-2, SHEBOYGAN, WISCONSIN

Atlanta • Boston • Chicago • Dallas • Denver • Detroit • Los Angeles • Minneapolis
New York • Philadelphia • St. Louis • San Francisco • Seattle • Montreal • Toronto

What the TEXTILE MILLS are doing

dent and board chairman of **Federal Knitting Mills,** said that the hosiery plant would be liquidated about the first of the year.

Republic Textile Equipment Co. has acquired for liquidation **Gosnold Mills Corp.,** New Bedford, Mass., including the land, buildings, machinery, all equipment, and mill supplies.

The Hadley Corporation's new plant for the manufacture of full-fashioned cashmere and woolen sweaters, at Weaverville, N. C., is pictured below. All operations from knitting of the components of the sweaters to packing and shipping are carried out here. The plant is

Lockwood Greene Engineers, Inc.

equipped with an oil-fired boiler with unit heaters and fluorescent lighting, sprinklers, and humidification in the yarn storage room.

All of the picking, carding, and spinning operations of **Harding Carpets, Ltd.,** are gradually being moved from the plant at Brantford, Ont., Canada, to Guelph, Ont.

The Virginia Textiles, Inc., Central Falls, R. I., narrow fabric manufacturer, recently sold all machinery and equipment at public auction.

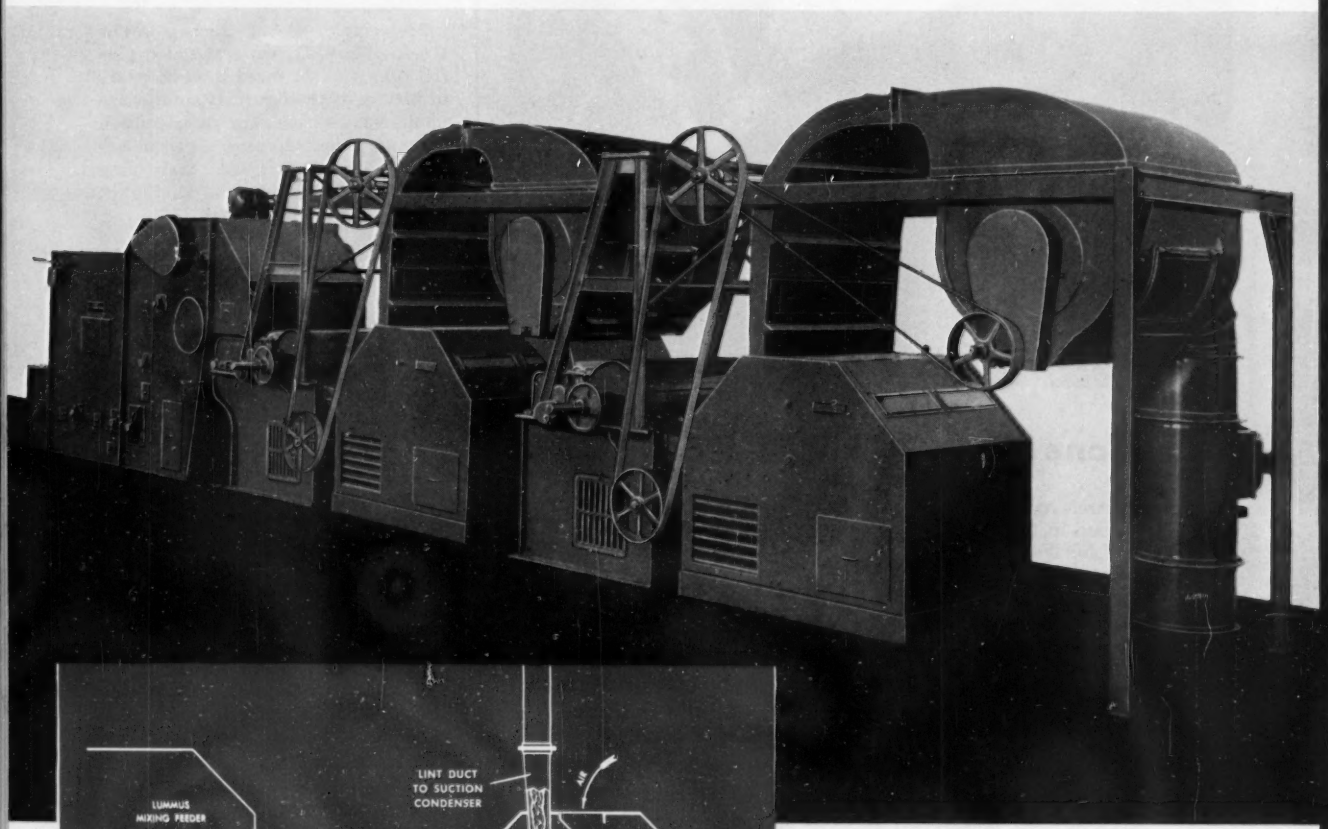
Huntingdon Mills, Inc., is the new name of the yarn winding firm in Philadelphia, Pa., that has been known as Huntingdon Winding Co. Morris Robbins is an officer of the firm.

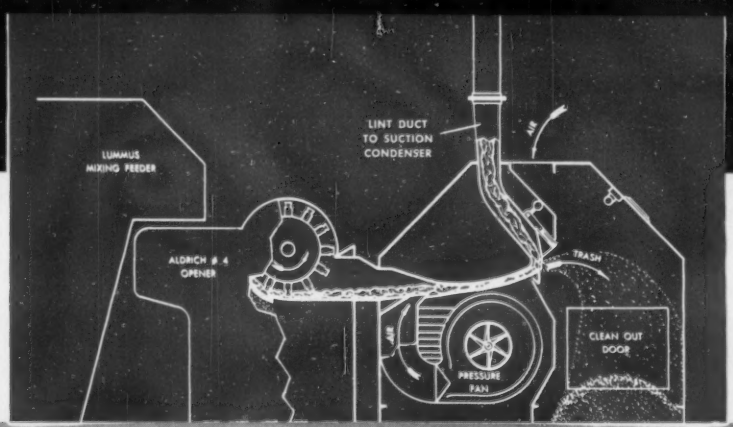
As soon as work in process has been completed, **Indianapolis (Ind.) Bleaching Co.** will be permanently closed down. The cotton mill unit of this plant, which is owned by Bemis Bro. Bag. Co., was closed down early in 1954. Reason for the closing was said to be the drastic decline in the use of bleached goods for bags.

Indian Head Mills, Inc., is the name under which the recently merged Indian Head Mills, Inc., and

To clean cotton it is desirable to take trash *out whole*. Merely breaking it up so fine that it is not noticeable in the sample will not keep it from showing in the yarn.

The Super-Jet Cotton Cleaner contains no saws or pin beaters to break up the trash to make neps and pepper. It cleans with air currents, and can not injure the lint or pulverize the foreign matter.





If you have not seen these machines in operation, we would like to show them to you.

ALDRICH-LUMMUS CLEANING SYSTEM

Made by

LUMMUS COTTON GIN CO.
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ALDRICH MACHINE WORKS
Greenwood, S. C.

Sold and Installed by

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● Many a promising criminal career has been nipped in the bud by Cyclone Chain Link Fence. When you specify Cyclone, you get Grade A protection. For proof, note that Cyclone is the most widely used property protection fence in the world.

You can buy cheaper fence than Cyclone, but it will cost you more per year. Cyclone gives full value for your dollar. Nothing but brand-new, top-quality material is used throughout. Posts and top rails are heavy and rigid. Gates won't drag. The chain link fabric is woven from heavy steel wire and galvanized *after* weaving for greatest resistance to rust and corrosion. And when Cyclone is erected by full-time, Cyclone-trained experts—your fence will stay trim and good-looking for years.

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UNITED STATES STEEL

What the TEXTILE MILLS are doing

Naumkeag Steam Cotton Co. is operating. James E. Robison, former president of Indian Head Mills, is president of the combined companies. Executive offices are in New York City. The new company has a cotton weaving mill and finishing facilities at Whitney, S. C., a cotton weaving mill at Cordova, Ala., and a customer service department at Cheraw, S. C.

287 employees of **Judson Mills,** Greenville, S. C., were awarded pins for from five to more than 25 years of service at the company's ninth annual service emblem presentation banquet. Guest speaker congratulating the operatives on their fine records was William A. L. Sibley, vice-president of Monarch Mills.

Julius Kayser & Co., New York, N. Y., has acquired all the outstanding stock of **Catalina, Inc.,** Los Angeles, Calif. Edgar W. Stewart, president of Catalina, will continue in that capacity, and has been elected to Kayser's board and executive committee. Important benefits of the acquisition were said to be: Catalina now has distribution points in the East and is able to increase its number of outlets; reduction in costs through consolidation of offices; Kayser mills will supply certain fabrics for Catalina products. * * * A new manufacturing plant is being constructed by **Catalina, Inc.,** in Whittier, Calif., which will be devoted exclusively to knitting sweaters and swim suits. The one-story building will be adjacent to the swim suit plant with 35,000 sq ft of floor space, and will utilize the latest knitting equipment, including full-fashioned machines for making cashmere and lamb's wool sweaters.

14,000 sq ft more floor space is being provided at the Central Falls, N. C., plant of **Klopman Mills, Inc.,** for office and manufacturing use. The addition, completion of which is expected around June 1, will permit more flexibility and allow production of a wider range of fabrics.

LaFayette (Ga.) Cotton Mills has been purchased by J. W. Valentine & Co., Inc., New York, N. Y.

Fire, origin of which is unknown, destroyed the **Landrum (S. C.) Hosiery Mills** recently. Damages were

and NOW *in* GRIFFIN

A ***NEW*** Stowe-Woodward rubber roll covering plant . . . all new . . . and designed from the ground up for the manufacture of rubber covered rolls exclusively.

Here in Griffin . . . in the heart of the expanding Industrial South . . . are complete facilities for every stage of manufacture, from raw rubber to finished roll, including the big rolls of today, and the bigger ones of tomorrow. Like Stowe-Woodward's Neenah Plant . . . opened less than 8 months ago . . . this new southern plant is part of a program planned to bring closer to the industries it serves, Stowe-Woodward's

"Rubber Rolls with a Reputation"

S-W INC.

STOWE-WOODWARD, Inc.

Craftsmen in rubber rolls

NEENAH, WISCONSIN — NEWTON 64, MASSACHUSETTS — GRIFFIN, GEORGIA

For further information use Handy Return Card, Page 187

portrait of a TRAVELING SALESMAN

who speaks 15 languages and has traveled the world over.

FIDELITY SKEIN REELERS are their own best salesmen—they have "told" and "sold" their own story of increased production and profit in 15 languages and 25 countries. We feel confident that they can "tell and sell" you on their advantages.

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Canadian Representative: W. J. Westaway Co., Ltd., Hamilton, Ontario, Canada.

What the TEXTILE MILLS are doing

estimated to be $100,000 by Dennis Dunn, president.

Manufacture of woolen carpet yarns is being discontinued by **James Lees & Sons Co.,** Bridgeport, Pa., Joseph L. Eastwick, president of the carpet manufacturing firm, has announced. Spinning of tufted carpet and worsted yarns is planned for the Bridgeport plant.

Lehigh Spinning Co., Allentown, Pa., has under consideration installation of additional spinning machinery and auxiliary equipment to increase present output by about 50 per cent.

All of the real estate, machinery, and equipment of **Lyn Spinning Co.,** Woonsocket, R. I., has been sold at public auction.

The **Moller-Dee Textile Corp.** in Naharia, Israel, is expanding its operations to include the production of sewing thread and the establishment of a large piece goods dyeing plant, it is reported in "Economic Horizons," monthly publication of the Jewish Agency's Economic Department in New York. The three-year old mill now operates three departments—wool and waste spinning, combed yarn, and yarn dyeing—on a 90-acre site fronting on Israel's Mediterranean coast. Maller-Dee pioneered in the processing of Israel cotton whose cultivation began in 1953.

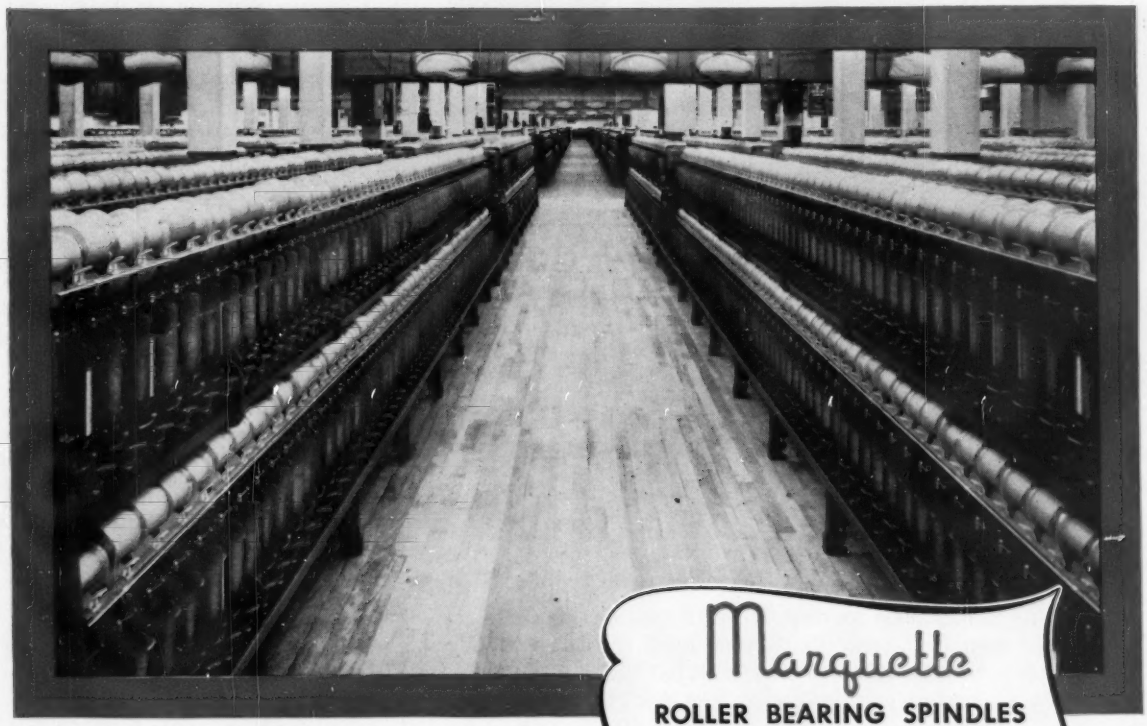
Monarch Mills, Union, S. C., honored its employees and their families at an outdoor barbecue recently in recognition of the best safety record ever achieved at the mill. Liberty Mutual Insurance Co. presented a safety plaque to the plant which recently chalked up a record of 2,176,582 man-hours without a lost-time accident. * * * A $2,000,000 improvement program is planned for Monarch's three plants, including a substantial amount of new machinery.

Stretch anklets for men, boys, and misses are being produced at **Myles Hosiery Mills, Inc.,** High Point, N. C., a 50-machine unit leased from the Terry Hosiery Mill for operation by I. Cabot, formerly of Cabot Knitting Mills, Lowell, Mass.

Harold Hurst, 15 Hay St., Newton, Mass., is principal incorporator and

LESS THAN 1¢ PER SPINDLE

for replacement parts and repairs



Marquette

ROLLER BEARING SPINDLES with full-floating footstep bearing . . . *for all textiles*

A large southern mill has *49,394* Marquette Roller Bearing Spindles in operation, some of which were purchased as far back as *1946*.

To date they have spent only *$441.84* for repairs—an average of $.009 per spindle!

Many other mills have had the same money-saving experience with Marquette Spindles. They have learned that these spindles not only give *better performance* at *higher speeds*, but also save on power, lubrication, tapes and general maintenance.

We'll be glad to arrange for a test installation in *your* mill to prove that you too can increase your production and reduce your costs by using Marquette Spindles.

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STEEL-FRAMED PLATFORM TRUCKS

Load 'em high . . . treat 'em rough. Fairbanks steel-framed trucks bounce back for more. Tough select oak platforms, bolted to sturdy steel frame mounted on Fairbanks **LOCKWELD** Steel Double Ball Race Swivel Casters — — give you low cost, dependable service mile after mile, year after year.

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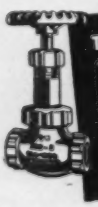
Vulcanized Rubber-Tired Wheels — for long trouble-free service and easier movement under comparative load conditions. Give you greater floor protection, too.

Fairbanks Steel-framed hand trucks . . . a type for every purpose . . . in every industry.



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What the TEXTILE MILLS are doing

representative of **Narraganett Braid Mills,** Pawtucket, R. I., which was recently chartered for the manufacture of braid, tapes, and other narrow fabrics.

Nashua Finishing Co. is a new concern which has taken over the finishing plant of Indian Head Mills, Inc., in Nashua, N. H. The company has also purchased for removal to Nashua all equipment in the printing department of Cheney Bros., Manchester, Conn. Glenn D. Jackson, Jr., is vice-president and general manager.

Oneita Knitting Mills, Utica, N. Y., established in 1874, discontinued operation last month.

Construction of a new wing on the north side of the **F. W. Poe Mfg. Co.** plant in Greenville, S. C., is under way to enlarge the weaving facilities. The addition will increase the floor space in the mill by about 50,000 sq ft.

At **Ray-Ser Dyeing Co.** in Chattanooga, Tenn., finished stretch nylon yarn is being dyed in a range of colors and a range of fastness properties, according to an announcement by Frank E. Cater, president, and socks made from it are entirely satisfactory. The firm has for some time also been dyeing nylon with no additional twist being added to the manufacturer's yarn, as well as manufacturers' twist yarn for the making of stretch nylons, Mr. Cater said.

Twenty conventional spinning frames have been replaced at **Firestone Textiles, Inc.,** in Gastonia, N. C., by twenty large package spinning frames.

Charles Di Marco, formerly president of Oxford Dyeing & Finishing Co., is head of the new **Seneca Dyeing & Finishing Co.** in Paterson, N. J.

Seamloc Carpet Co. has been organized by several former employees of Goodall-Sanford, Inc., to manufacture the same type of carpeting as was previously produced under the Seamloc trade name by Goodall-Sanford.

Seyer Silk Dyeing Corp., Haledon, N. J., has purchased from J. P. Stevens & Co., the **Delta Finishing Co.** plant in Philadelphia, Pa., which ceased operations last year. The plant

Introducing

METRO-ATLANTIC'S

RANEDARE

highly durable WATER REPELLENTS!

A New Water Repellent Series Created To Meet Specific Demands!

For Synthetics: — **RANEDARE R** Designed specifically for synthetic fabrics for use with crease resistant and stabilizing resins to provide durable water repellency, shrinkage control, wrinkle and spot resistant effects. Easily diluted in cold water. Low foam, has good running properties. Results are durable to dry cleaning and washing. Ranedare has an extremely high shelf life and is very compatible with other resins.

For Cottons: — **RANEDARE C** Especially for use on cotton, to produce high and durbale water repellency. Durable to repeated washings or dry cleanings. Very economical, easily diluted. Has high shelf life. Runs exceptionally well with low foam.

A Silicone for Synthetics: — **RANEDARE S** (Formulated from General Electric Wonder Silicone Dri-Film). Top durability to dry cleaning, even on velvets and sheer fabrics where other durable water repellents fail. High fastness to consecutive washings. Also works well on cottons and wools.

Here are three new ideas — new chemical compounds available for the first time after many plant trials and many thousands of test yards run to prove quality and efficiency.

Complete Technical Data — Trial Runs — On Request

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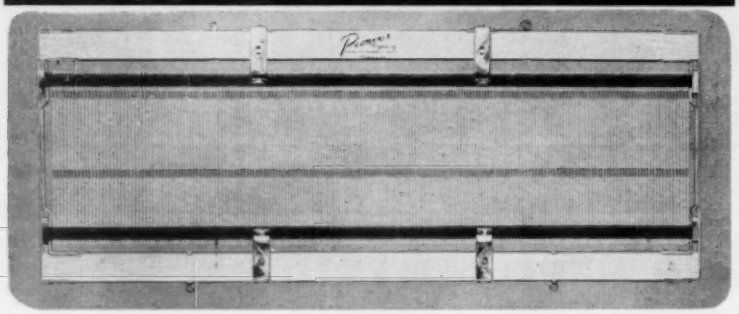
PIONEER'S DRAW-RITE FRAME

IT'S NEW!



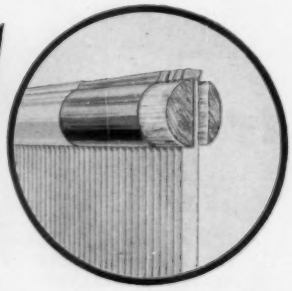
PAT. APPLIED FOR

The Pioneer Draw-Rite Frame fulfills all the requirements of the new-type drawing-in machine. Features include an end piece which enables heddles to be slipped on and off easily; heddle bars which are riveted to rod supports; and a complete adjustment on each support.

Draw-Rite Frames are available with both single and double bars. Double bars can also be drawn on drawing-in machine. Draw-Rite Heddles are available for all type frames.

PIONEER'S NU REED

With Patented Rib Construction



The 10% to 15% extra weaving space afforded by NU REED has made this the Reed that mills have sought for many years. Added strength is gained by using wider wire, making a more resilient, durable reed. No loom realignment is necessary and NU REED is interchangeable with standard reeds in use today.

INVESTIGATE THESE FAMOUS MILL-TESTED PRODUCTS:

FLAT STEEL HEDDLES
REPAIR HEDDLES
FRAMES
ACCESSORIES
REEDS
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COMBS
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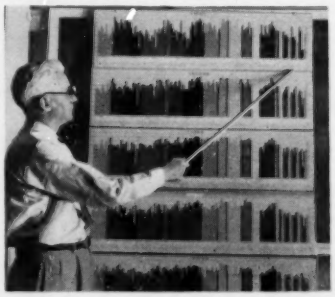
Greenville, S. C.
Tel. LD. 48

What the TEXTILE MILLS are doing

contains approximately 200,000 sq ft on an eighty-acre tract of land.

Soule Mill, New Bedford, Mass., has launched its 1955 promotion of fiber glass screening under the new trade name "Soule" fiber glass screening. Soule started weaving glass yarns in 1938.

Good housekeeping in the mills is stressed by management of **Fieldcrest Mills.** A program administered by a management housekeeping committee has been under way for nearly two years. Howard Barton, secretary of the committee, is assigned full-time to coordinate housekeeping in all of the North Carolina and Virginia plants of the company. The



goal is to have Fieldcrest's housekeeping second to none in the industry, a recent issue of the "Fieldcrest Mill Whistle" stated. In the photo above, Mr. Barton points to a colored chart showing the housekeeping of each department in the mills.

United States Rubber Co. has developed a new method of permanently applying vinyl designs to fabric for upholstery use. Known as Breathable Naugahyde, it combines the breathable feature of fabric with vinyl's durability and resistance to soiling, the announcement indicated. The development was said to offer an opportunity for design, texture, and color effects which could never be achieved with vinyl before.

Note: *If "Textile Industries" is not already on the mailing list for the employee publication published by your textile manufacturing plant, the editors would very much appreciate receiving it regularly. Please send yours to The Editor, "Textile Industries," 806 Peachtree St., N. E., Atlanta 5, Ga.*

Miller AIR CYLINDERS

In Thousands of Different Selections For Immediate Delivery!

HARD CHROME PLATED PISTON RODS
Prevent Scratch-Damage, Nicks and Rust

DIRT WIPER SEALS
Protect Rods, Seals, Bushings

SOLID STEEL HEADS, CAPS and MOUNTINGS
Eliminate Breakage

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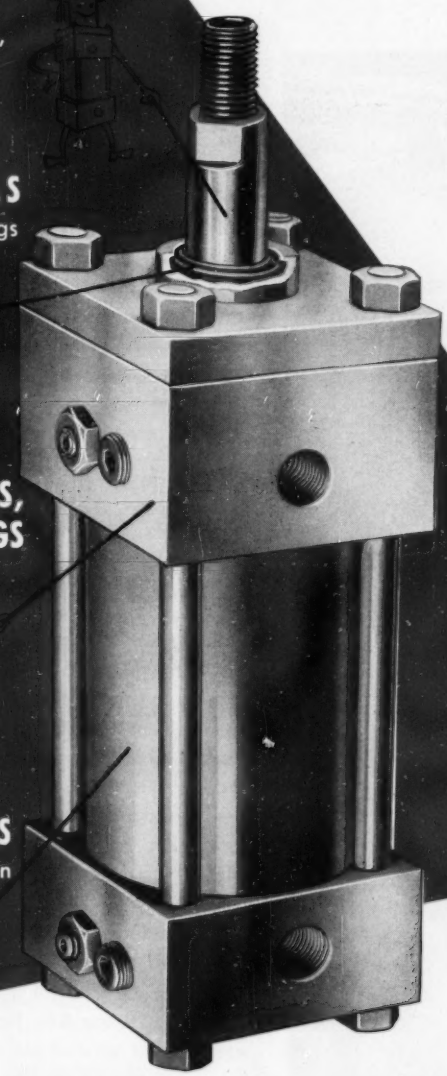
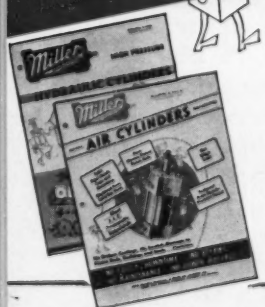
Eliminate Rust and Corrosion



Rapidly expanding list of quality-famous Miller Cylinders for immediate, off-the-shelf delivery now includes thousands of different, popular selections—both air and hydraulic—cushioned and non-cushioned. Bores up through 8" air, 5" hydraulic. Over 30 different mountings. Strokes up to 18".

Larger bores (up to 20") and longer strokes (up to 22 feet) are available on longer delivery.
Miller boosters also in stock for immediate delivery.

Write For Catalog and Stock List



WRITE FOR CYLINDER BULLETINS A-105 and H-104

Complete Miller cylinder line includes: air cylinders, 1½" to 20" bores, 200 PSI operation; low pressure hydraulic cylinders, 1½" to 6" bores for 500 PSI operation, 8" to 14" bores for 250 PSI; high pressure hydraulic cylinders, 1½" to 12" bores, 2000-3000 PSI operation. All mounting styles available.

MET J. I. C. PNEUMATIC STANDARDS years before their adoption in 1950.

SPACE-SAVING SQUARE DESIGN originated by Miller in 1945.

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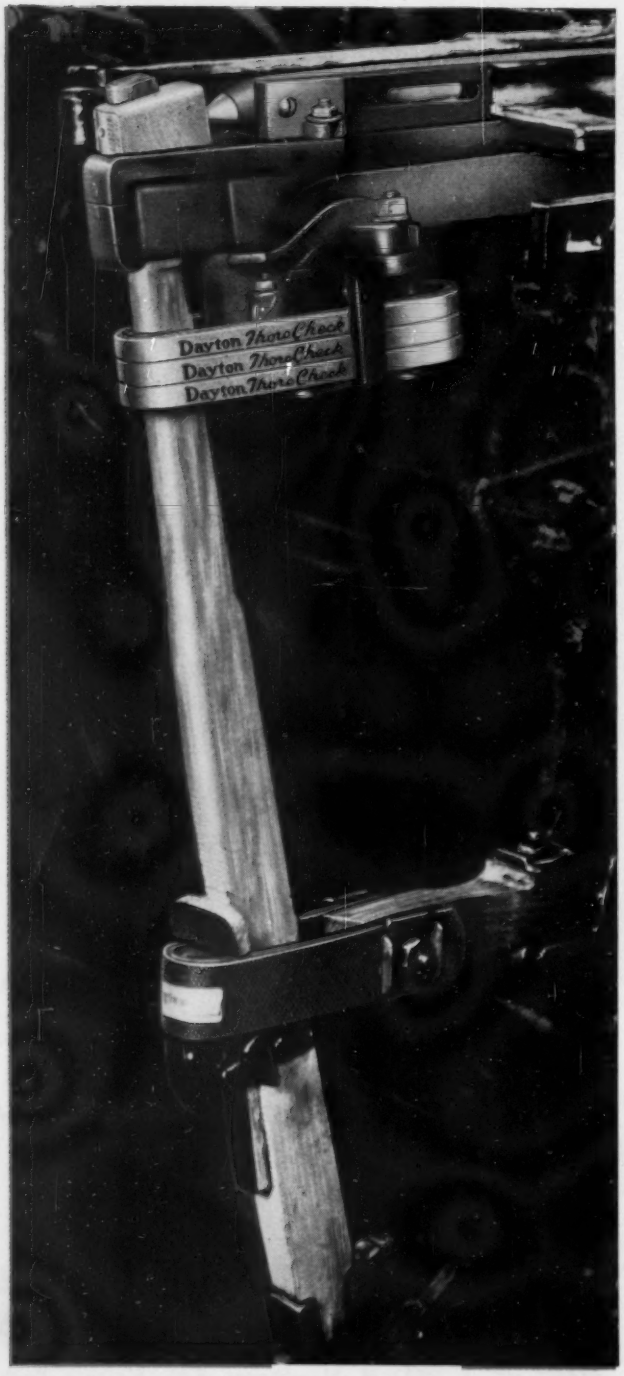
AIR & HYDRAULIC CYLINDERS • BOOSTERS • ACCUMULATORS
COUNTERBALANCE CYLINDERS

3 DAYTON PRODUCTS DESIGNED TO Step up

Get smoother, safer checking, reduced wear and higher loom production with Dayton Thorobred Loop



You'll handle your share of the new, profitable textile business with dispatch by equipping your looms with these 3 Dayton products scientifically designed to cut maintenance costs, improve output. Look at these money-saving features:

Dayton Thorobred Loop Pickers, for example, cut costs in many mills as much as 25 to 50%. That's because they're built to take the tremendous poundings of high speed shuttles. Tilted construction gives them a decided advantage because it assures perfect shuttle contact every time. Flaired bottom and tapered picker hole permit easy, accurate seating without tearing of loop ply. Made as a single unit, there's nothing to break or expand when picker is driven on stick. A narrow back provides non-wear feature on lay end strap.

Most revolutionary of all textile products, Dayton ThoroCheck Check Straps offer real economy and service. Typical of their performance Dayton Check Straps, in test on X-2 looms, have seen round-the-clock service, 5 days a week, for over 9 months without visible signs of wear. Under similar conditions other straps lasted only 2 to 3 months. The savings on replacement alone paid for the installation of Dayton ThoroCheck Endless Check Straps. Because they are unaffected by moisture or humidity, they need practically no adjustment. This means higher production, more productive hours for your looms when equipped with Dayton ThoroCheck Endless Check Straps.

Dayton Thorobred Deluxe Lug Straps are specially constructed in one piece, with built-in molded plug, to cushion the shock of jarring picking thrusts. Easy to apply, Dayton Lug Straps have no permanent stretch when installed and are so designed as to offer less abrasive action on picker stick and hold-up strap. In addition, Dayton Lug Straps are unaffected by temperature and humidity and they resist oils and greases. In tests, Dayton Thorobred Deluxe Lug Straps have averaged twice the service life of any other strap on the market.

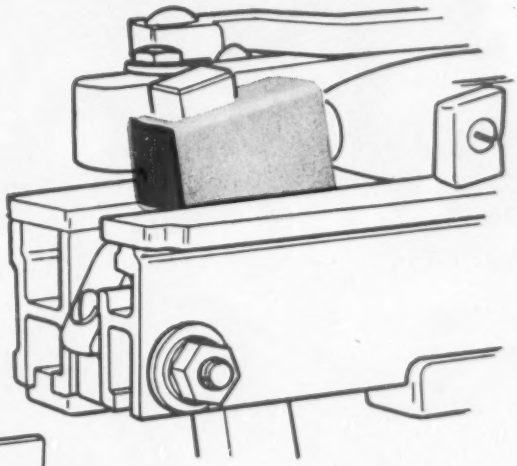
Put them all together and you've got an unbeatable combination that will outperform all other similar products on the market. For full capacity operation in your weaving room—equip throughout with synthetic rubber Dayton Loop Pickers, Check Straps and Lug Straps.

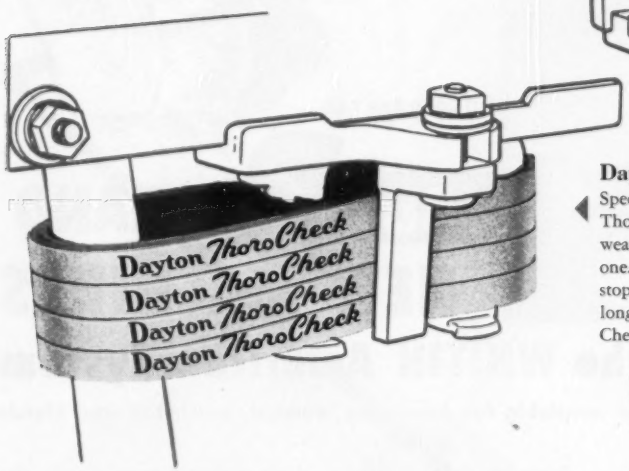
Weaving Room Efficiency

Pickers, Dayton ThoroCheck Endless Check Straps and Dayton Thorobred Deluxe Lug Straps.

Dayton Thorobred Loop Pickers

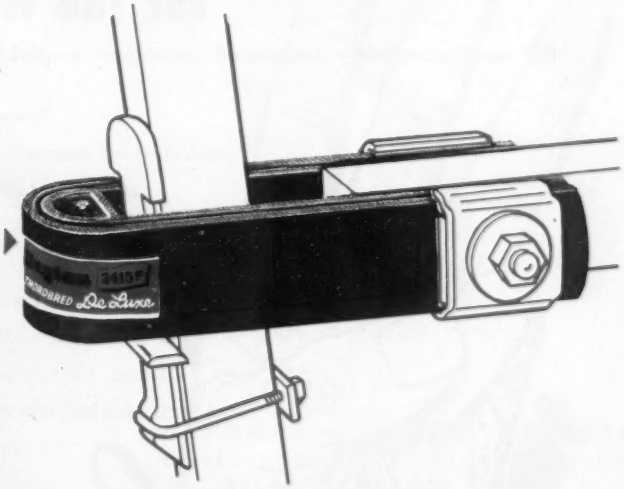
Made of a specially woven fabric Dayton Pickers are built to stand up for long periods under the poundings of high-speed shuttles. Exterior roughness has been reduced to a minimum to prevent hanging filling and lint pick-up. Daytons are always uniform in size . . . cut picker cost 50%, seat easily on picker stick and offer perfect shuttle contact at all times.





Dayton ThoroCheck Endless Check Straps

Specially designed and built to exacting standards Dayton ThoroCheck Check Straps save important time and money in weaving operations . . . outlast other check straps 2 & 3 to one. Daytons check more smoothly, eliminate drag over stick, stop it with a graduated braking action. Result: less wear, longer life and lower replacement costs with Dayton ThoroCheck Endless Check Straps.



Dayton Thorobred Deluxe Lug Straps

Built in 1 piece with molded plug to cushion picker thrusts, Dayton Lug Straps have no rivets or other parts to work loose. Special longitudinal cord built into center of lug, in line with thrust, gives Daytons added strength, longer life . . . prevents jarring and protects costly loom parts. Easy to apply, Dayton Thorobred Deluxe Lug Straps last twice as long as other straps in actual test operations.

Get set now to keep looms running at capacity—equip throughout with Dayton Loop Pickers, Endless ThoroChecks and Deluxe Lug Straps. Your Dayton representative will be glad to give you complete details. Or write Dayton Rubber Co., Textile Div., Dept. 362, Woodside Bldg., Greenville, S. C.

Dayton Rubber

Since 1905

Dayco and Dayton Thorobred Textile Products for better Spinning and Weaving

Dayton Rubber Co., Textile Division, Woodside Bldg., Greenville, S. C.

Superflex Spinning Frame

Quik-Set Roving Frame

NOT 1

NOT 2

ROTO-DRAFTER

...BUT 3 BRAND NEW MACHINES

for the WHITIN American System

the only completely integrated unit—now available for processing worsted, synthetics and blends

Now for the first time all three machines necessary for the production of worsted, synthetic, or blended yarns on the American System are available from Whitin. The new and remarkably versatile WHITIN ROTO-DRAFTER processes top. The new WHITIN QUIK-SET Roving frame will accommodate worsted sliver weighing up to 120 grains and 100% synthetic sliver weighing up to 100 grains. The new Whitin American SUPERFLEX Spinning frame, like the QUIK-SET Roving frame, has top arm roll suspension and new weighting arrangements. A well matched trio of outstanding textile machines for quality production and profits . . . **the Whitin-American System Way!**

Complete descriptive literature on all of these machines is available.

Whitin MACHINE WORKS

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CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

NATIONAL SOLANTINE VIOLET BL

direct dye with high tinctorial power

This fast-to-light, non-dusting direct dye is especially recommended for coloring mixtures of cotton or rayon and wool. With it, in many instances, almost perfect unions between the vegetable and animal fibers can be achieved without using shading dyes.

National Solantine Violet BL can be applied at low temperatures and is only slightly affected by the presence of metals in the dye bath. It is an excellent money value, well worth trying when the need arises. Our nearest office will gladly send you a working sample, technical bulletin and price quotation.

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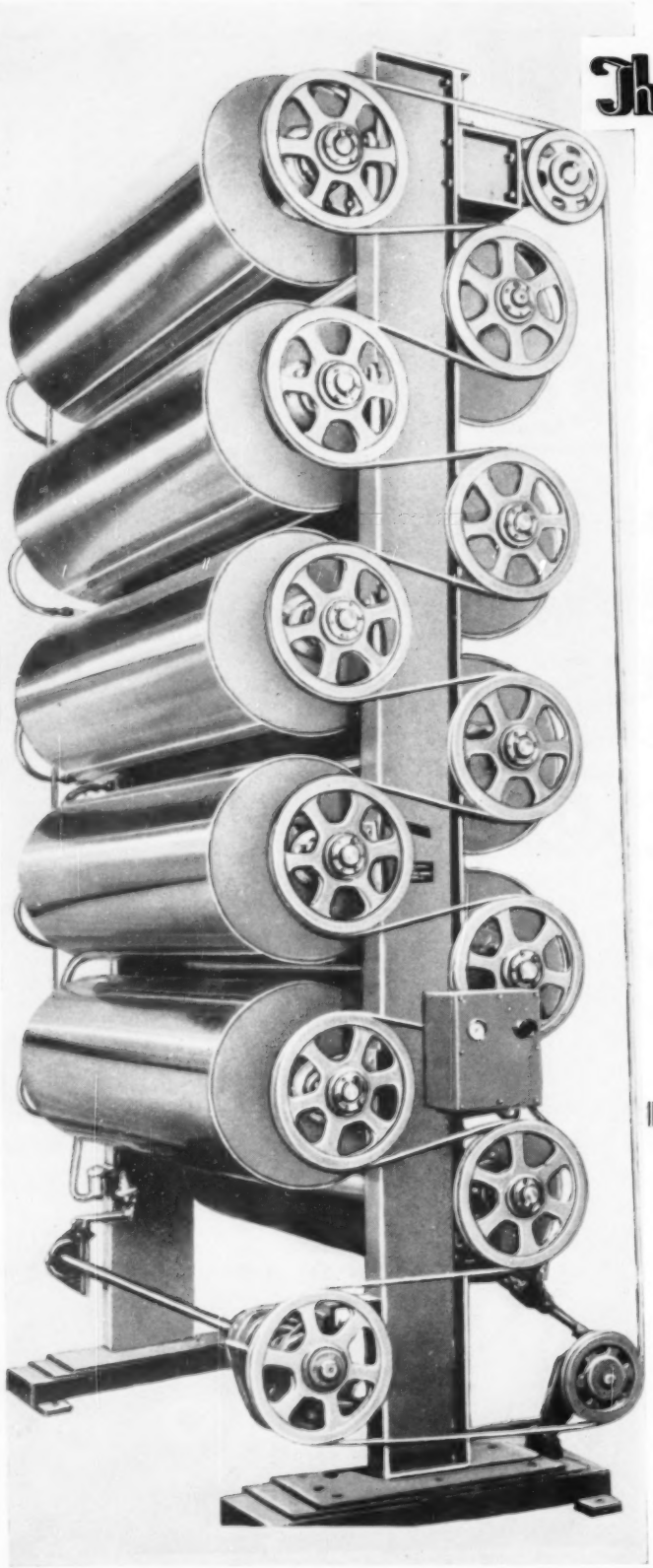

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SPARTANBURG, S. C.

Presents:

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For Dry Cans, With These Outstanding Features:

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- *Oil and Grease Free*
- *High Speed Operation*
- *Long, Trouble-free Service*
- *Low Maintenance Expense*
- *Automatic Pneumatic Belt Tightening*

Your present gear or chain drives can be converted at nominal cost. Call us for free estimates at no obligation.

THE TEXTILE SHOPS

SPARTANBURG, SOUTH CAROLINA

PHONES 36356 / 36357

Technical Service Procedure Being Followed in The Development of Fabrics Made With

ARNEL†

TRIACETATE

Sample poundage of ARNEL has been shipped to a number of mills.

In general, such shipment has been confined to mills whose intended fabric types have been established by Celanese research as appropriate to the use of ARNEL.

When initial laboratory samples are complete, we are requesting an opportunity to check them informally and to offer whatever recommendations our experience in ARNEL fabrication may suggest.

Where definite problems exist, technical service teams are set up to work with the mill customer's own technical men, in their plant, to effect an early practical solution.

When production is started, we are requesting that first yardage again be submitted both in greige and finished state for a second check to assure that no new conditions have developed which might affect the wearability of the fabric.

As these fabrics are approved by Celanese they become eligible for the use of Celanese ARNEL hang tags and participation in Celanese promotional efforts.

We believe that by following these procedures, mills will be helped to avoid the pitfalls inherent in the handling of any new fiber, and that the public's important first experience with ARNEL will live up to the high promise which the nature of the fiber makes possible.

†Trademark

Celanese

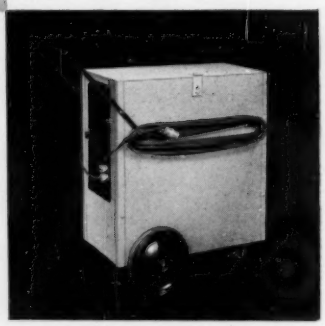
CORPORATION OF AMERICA, 180 MADISON AVENUE, N. Y. 16.

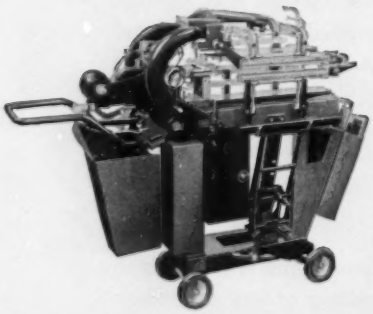
BARBER-COLMAN

SERIES "M" MODELS NOW MADE IN **10** SIZES
FROM 36" TO 126" BY 10" VARIATIONS

PORTABLE *Warp-Tying Machines* FOR ALL PURPOSES

The BARBER-COLMAN line of warp-tying machines has now been extended to cover practically every conceivable application. As noted above, the Type "M" machines are now available in *ten* sizes. These machines tie the *full width* of the warp in one operation, work directly in back of the loom, and are made in several types to tie-in cotton, spun yarns, filaments, wool, worsteds, or synthetic yarns from a flat sheet or from an end-and-end lease. When using a Type "M" Warp-Tying Machine, none of the weaving elements need be removed nor any of the loom settings disturbed. The picture at the right shows the special cart used for protecting the Knotter Unit when not in use and for carrying it from one frame to another when two or more are employed. This carrier also contains the variable speed-controller for the Knotter Unit. These machines are probably the most versatile available for most mill conditions.





IMPROVED SERIES "L" MODELS IDEAL FOR CERTAIN CONDITIONS

BARBER-COLMAN Model "L" machines are familiar to two generations or more of mill people, because they have been on the scene in one form or another for 45 years. The latest designs, one of which is shown here, have many up-to-date improvements which distinguish not only their appearance but also their operation and efficiency. These compact, versatile, and easily-moved machines have many important applications in both large and small mills. Barber-Colman representatives are thoroughly versed in the usefulness and applicability of both Model "L" and Model "M" machines, and can be consulted with confidence as to which might suit a given situation best. Also, it is important to know that all users of Barber-Colman machines are served promptly and skilfully by an alert service group of wide experience.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • WARP DRAWING MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

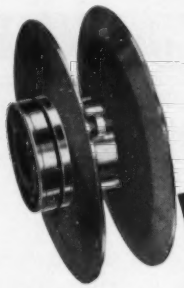
FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U.S.A. MANCHESTER, ENGLAND MUNICH, GERMANY

INDIA
Batliboi & Company
Forbes Street, Fort
Bombay, India

MEXICO
J. Rabasa
Isabel la Catolica 45-913
Apartado 7348
Mexico D.F., Mexico

BRAZIL
Quimanil S.A. Anilinas
e Representacoes
Rua Glicerio 537/547
Caixa 5658 e 3431
Sao Paulo, Brazil

JAPAN
Nippu Trading Co., Ltd.
Toa Koshin Bldg.
3-Chome Kitahama Higashiku
Osaka, Japan



American Adjustable-Diameter Sheaves feature patented, double-taper hub which locks sheave to shaft, flanges to hub for powerful wedge-grip on the shaft. Flanges move simultaneously for perfect V-belt alignment. Entire unit is dynamically balanced for smooth operation. Adjusts to any pitch diameter in seconds.

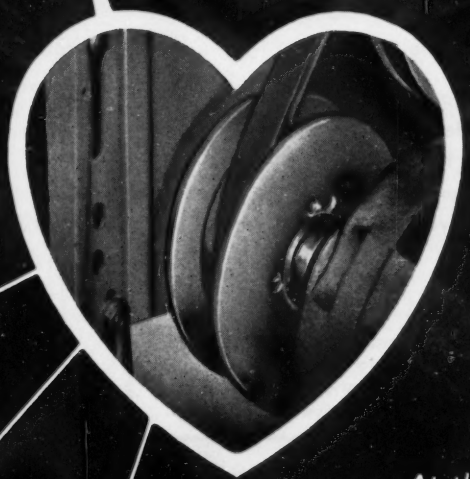
Profit or loss? It's the heart of the machine that makes the difference

Probably no other manufacturing operation is so sensitive to speed variation as textile processing, where a 1% speed change often means the difference between profit and loss.

Belt-slip and creep, changes in pitch line under full load, differences in actual motor speeds from rated speeds and other variables can cause speed changes as high as 11% or more, on V-belt drives.

Best answer to the problem is simple, obvious, logical—an American Adjustable-Speed V-belt Drive. These drives permit fast, easy speed changes up to 100% by a simple screw adjustment which changes the pitch diameter of the drive sheave. No pulley switching, no expensive transmissions, little down-time is involved.

You'll find no more economical—or efficient—method of adjusting textile machinery to the one *right* speed for every process than American Adjustable-Speed Drives. See your distributor today or write for full details without obligation. The American Pulley Company, 4232 Wissahickon Ave., Philadelphia 29, Pa.



At the Profit End of the Machine

Power Transmission by

AMERICAN

PULLEY COMPANY

END-O*
the quick trip ticket for rolls of cloth

*traveling lengthwise

rolls of cloth move safely and surely on

ALVEY Roll Conveyors

The Alvey conveyor is efficient and work-saving. Space is conserved, and travel time is reduced from one department to the next.

This is another of the many specialized systems which Alvey can provide to save time, space and operating costs in your textile mill. Your letter will bring an Alvey engineer to explain the advantages of an engineered conveyor system in your operations. Write today!

Every time you MANhandle a package, you add to the cost and nothing to the value; therefore, put your packages on Alvey Conveyors that are engineered to fit your individual requirements.

ALVEY

ALVEY CONVEYOR MANUFACTURING COMPANY
9306 Olive Street Road, St. Louis 24, Missouri
BRANCH OFFICES IN PRINCIPAL CITIES

154

Personal NOTES
ABOUT MEN YOU KNOW

Botany Mills, Inc., has announced the resignation of vice-president **F. Eugene Ackerman.** He will continue to serve the company as merchandising and customer relations consultant.

Cecil F. Adamson, assistant controller of Burlington Mills Corp., Greensboro, N. C., has been elected to membership in the Controllers Institute of America.

The South Carolina State Chamber of Commerce has elected **A. D. Asbury,** partner in J. E. Sirrine Co., Greenville, S. C., president. Vice-presidents are: **Charles W. Coker,** Sonoco Products Co., Hartsville; and **Charles A. Gibson,** director of manufacturing for Ely and Walker Dry Goods Co., Greenville.

Succeeding the late Otto Hauck as president of Midvale (N. J.) Knitting Mills is **Mrs. Johanna Attenberger.**

Associated Spinners, Inc., Gastonia,

Mr. Bergman

N. C., has appointed **Howard Bergman** vice-president.

New members of the board of directors of Washington Mills Co., Winston-Salem, N. C., are **Walser A. Blackwood** and **John D. Siewers.**

Irene Blunt has been named executive director of the National Federation of Textiles, and retains her title of secretary and treasurer.

L. Hugh Ballard has assumed the position of general superintendent of the finishing division of American & Efird Mills, Inc., Mt. Holly, N. C. * * * **Arthur Veevers** is now superintendent of the company's thread

Fact:

Rugged Westinghouse Industrial Heaters available in 24 Sizes . . . 8 Coil Selections . . . 150 Ratings from 100,000 to 2,500,000 BTU/hr . . . 2,000 to 25,000 CFM each

HEAVY-DUTY COIL. Tapered steel fins bonded to 1" wrought iron pipe—with internal steam distributing pipe—solder dipped for permanent bond and corrosion resistance.

1. Proven, Westinghouse-manufactured, extended surface heating coils good for continuous operation up to 200 psig.

2. Die-formed casings with rounded corners eliminate accidents and dirt catching pockets. Front and back panels easily removable.

3. Multiple louvered outlets for efficient distribution of heated air.

4. Self-aligning, grease-lubricated ball bearings mounted outside casing, readily serviceable.

5. Face and by-pass dampers permit continuous air circulation to maintain uniform temperatures.

NOTE: Louver type mixing box accessory permits introduction of fresh air for make-up and ventilation, with or without filters.

Solve your space heating problems with Westinghouse-Sturtevant Industrial Heaters. Eliminate cold, drafty conditions caused by excessive cold infiltration through leakage or exhaust.

Two Types With Wide Applications:

GENERAL PURPOSE HEATER . . . For manufacturing areas, warehouses, garages, commercial buildings—with standard non-ferrous heating coils.

HEAVY-DUTY HEATER . . . For continuous-duty high-pressure systems, or industrial process work—with wrought iron heating coils.

The compact packaged engineering of every Westinghouse-Sturtevant Industrial Heater provides units for mounting on floor, walls, or suspended from ceilings. In short, they can be placed where they will do the most good, and can be relocated to meet any change in plant layout.

Every unit is backed with a Westinghouse exclusive—*one warranty*. Only Westinghouse makes all principal components—Fans, Heating Coils, and Motors. You can get unit engineering and single equipment responsibility.

MORE FACTS? To find out how to solve your particular heating problem, call your Westinghouse-Sturtevant Sales Engineer . . . he is the "Man With The Facts" on heating, air handling, and electronic air cleaning . . . or fill in coupon below.

WESTINGHOUSE AIR HANDLING

YOU CAN BE SURE...IF IT'S

Westinghouse

J-80427

Westinghouse Electric Corp.
Sturtevant Division, Dept. **13A**
Hyde Park, Boston 36, Mass.

Please send more information on your Industrial Heaters.

NAME AND TITLE .....

COMPANY .....

CITY ..... STATE .....

BENJAMIN

"VAPOR-TITE"

FLUORESCENT LIGHTING UNIT

"EASY-IN, EASY-OUT"
lamp servicing despite high humidity with Benjamin patented "Springlox" depressible, rust-resisting metal-clad lampholders, featuring positive contact. Lamps are locked securely in place.

"Vapor-Tite" assures you of all these modern fluorescent lighting advantages in humid locations:

1. No Service Failures due to Humidity!
2. Solid Armor of Porcelain Enamel keeps out Moisture.
3. One-piece housing—No place for rust to get a foothold!
4. 85% or higher Reflection Factor!
5. Easily operated, gasketed, hinged louver frame with a choice of double-strength Grade A or Tempered Plate Clear Glass or Wire Glass.

Available for two or three 40-watt Preheat or Rapid-Start Slimline fluorescent lamps

For complete details on Benjamin humidity-defying fluorescent lighting units, send for Bulletin AD5929. Benjamin Electric Mfg. Co., Des Plaines, Ill. Makers of famous Benjamin and Leader Line Lighting Equipment and Sound Signals for Industry, Institutions and Commerce.

Sold Exclusively through Electrical Distributors

872

Personal NOTES ABOUT MEN YOU KNOW

plant at Mt. Holly. * * * **Thomas C. Smotherman** has been promoted to vice-president and sales manager.

Arthur B. Barnes has been elected board chairman of Ponemah Mills, Taftville, Conn. He is succeeded as president and treasurer by **Henry A. Truslow.**

Charles J. Chaban has been appointed research director and **William A. Corry** has been made laboratory manager of the Landers Corp., a Toledo, Ohio, fabric coating and processing firm. Working with Mr. Chaban as senior research chemist is

Mr. Carry **Mr. Chaban**

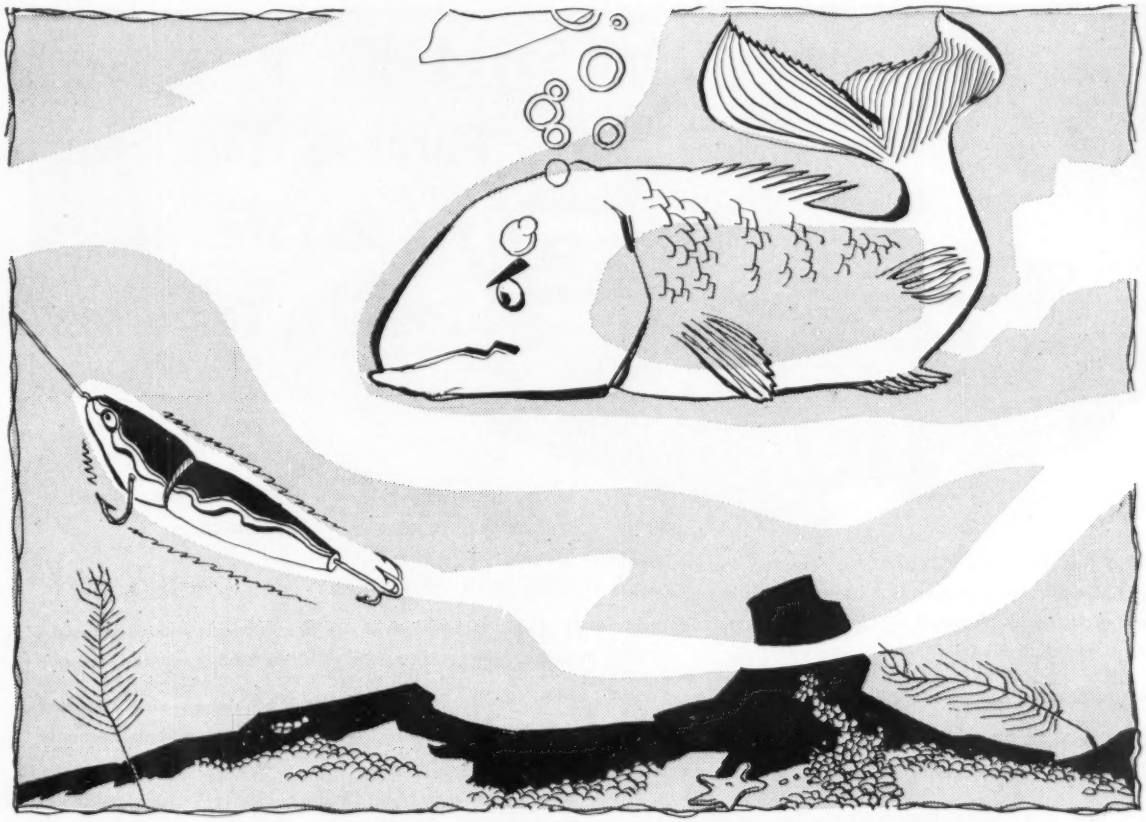
Dale Marsh. Edith B. Pursel has charge of the analytical laboratory, spectrophotometry, and product specifications. Kathleen M. Merritt supervises the testing laboratory section. Previous to the new appointments, Mr. Chaban had been chief chemist and laboratory manager, and Mr. Corry had been assistant to Mr. Chaban.

R. Buford Brandis, former research economist for the Chamber of Commerce of the United States, has joined the staff of the American Cotton Manufacturers Institute as associate economist.

Henry M. Bliss has retired as president and board chairman of Pacific Mills, Boston, Mass. He will remain with the company in an advisory capacity. Mr. Bliss has also been elected a director of Burlington Mills.

Conrad J. Busch has retired as vice-president of manufacturing at Narrow Fabric Co., Inc., Reading, Pa. He is succeeded by **Roy G. Manderbach. Otto Huber** has been named vice-president of production.

New officers of the Washington Section, AATCC, are **George S. Buck, Jr.,** chairman; **George Fulton,** vice-



THERE IS A DIFFERENCE!

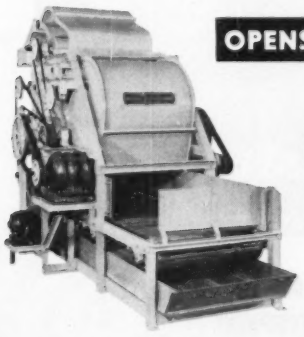
Those big bass which have lived long enough to get that way can tell the difference between that lure you're dragging under their noses and the real thing. There *is* a difference.

Make it a point not to get caught—remember there's a difference between openers, too. A *big* difference, for instance, between the CEN-TENNIAL TEXTILE FIBER OPENER and other openers on the market. CEN-TENNIAL incorporates many unique improvements in their opener. It is far and away the most efficient available today—*and the price is no greater!*

How efficient? Listen to this: Swift Manufacturing Company, Columbus, Georgia, is completely equipped with CEN-TENNIAL TEXTILE FIBER OPENERS. Use of the openers has resulted in cleaner picker laps and a tremendous saving of spinnable fiber. Breaking strength and yarn quality are improved and neps reduced. Hundreds of dollars are being saved daily.

Among other representative organizations who are equipped with CEN-TENNIAL TEXTILE FIBER OPENERS are Mount Vernon-Woodberry Mills, Inc., Joanna Mills Co., West Boylston Manufacturing Co., and Spartan Mills (Beaumont and Startex Divisions).

You, too, can effect such savings in *your* mill.



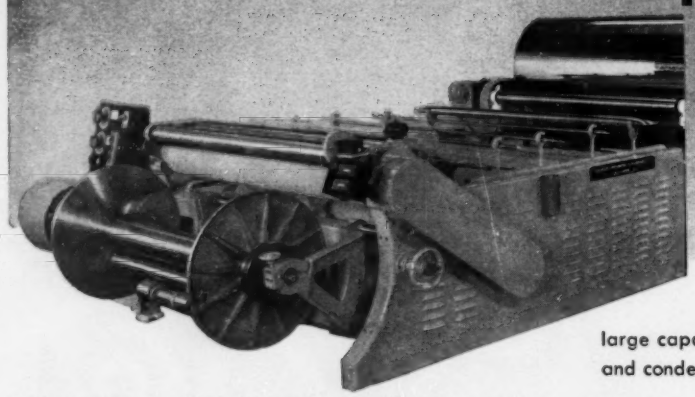
OPENS • CLEANS • BLENDS } COTTON • WOOL • SYNTHETICS

CEN-TENNIAL

COTTON GIN COMPANY

COLUMBUS, GEORGIA

The New Cocker High Speed all Purpose Warp Sizer for all Yarns of Today & Tomorrow



Cocker presents a New Warp Sizer evolved from twenty years of study and experience. It represents the progressive thinking and ideas of practical mill men operating hundreds of Cocker Warp Sizers on every type yarn.

1—Air operated carrier and delivery rolls

2—Air operated ironing compressor roll with finger tip variable pressure control

3—A fast and simple latch release for beam doffing requiring no change of position of beam carriage

4—Self locking split rod holders

5—Tension control at two points on the head end

CYLINDERS—This machine is available with 5, 7, 9, 11, 13, or more cylinders. Cylinders are furnished in ASME Code construction in any pressure up to 60 pounds. They are driven by double cut sprockets and roller chain and have large capacity headers with flexible tubing for steam inlet and condensate removal. Individual traps.

SIZE BOX FEATURES

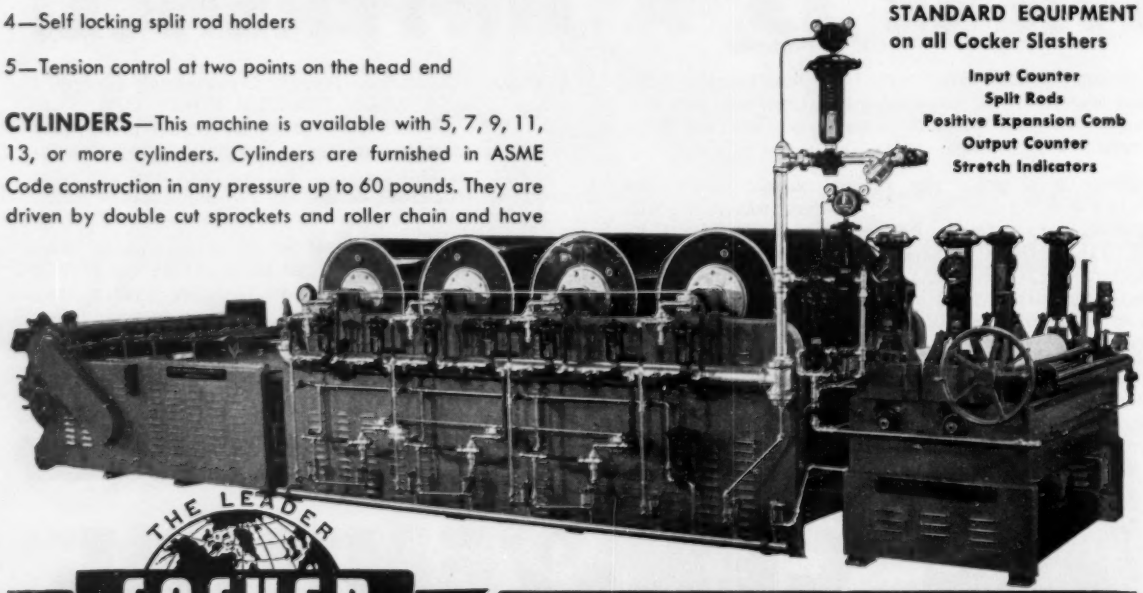
1. Large stainless steel size box jacketed with centrifugally cast stainless steel bottom rolls and rubber covered top rolls.

2. Unitized construction of extra heavy sealed size box bearings with packless seals reduce expensive maintenance to a minimum.

3. Absolute finger tip stretch control from size box to first cylinder.

STANDARD EQUIPMENT on all Cocker Slashers

Input Counter
Split Rods
Positive Expansion Comb
Output Counter
Stretch Indicators



THE LEADER
COCKER
AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

Thanks to you, our licensees . . . 1954 was the largest year in "Sanforized" history

(turn page please)

Thanks to you, our licensees...

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AUSTRAL SILK & COTTON MILLS PTY. LIMITED — Melbourne
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VETEX S.A. — Courtrai

BRAZIL

SAO PAULO ALPARGATAS, S.A. — Sao Paulo
COMPANHIA AMERICA FABRIL — Rio de Janeiro
COTONIFICIO RODOLFO CRESPI, S.A. — Sao Paulo
CIA. JAUENSE DE FIACAO S.A. — Sao Paulo
S. A. INDUSTRIAS REUNIDAS F. MATARAZZO — Sao Paulo
COTONIFICIO DA TORRE, S.A. — Recife
FABRICA DE TECIDOS CARLOS RENAUX, S.A. — Brusque, Santa Catarina

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DOMINION TEXTILE COMPANY, LTD. — Magog, Que.
MONTREAL COTTONS LIMITED — Valleyfield, Que.
ROBINSON COTTON MILLS, LIMITED — Toronto, Ont.
WABASSO COTTON COMPANY, LTD. — Three Rivers, Que.
WOODS MFG. CO., LTD. — Welland, Ont.

CHILE

TEJIDOS CAUPOLICAN, S.A. — Concepcion

COLOMBIA

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TEJIDOS UNICA, S.A. — Manizales

CUBA

COMPANIA TEXTILERA ARIGUANABO, S.A. — Havana

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BLOCH & ANDRESEN — Copenhagen
AKTIESELSKABET DE FORENEDE TEXTILFABRIKKER I. AALBORG — Aalborg
A/S GRENAA DAMPVAEVERI — Grenaa
A/S VEJLE TEXTILFABRIK C. MULLER — Vejle

EIRE

SETFAST LIMITED — Dublin

FINLAND

OY FINLAYSON-FORSSA AB — Tammerfors
VAASAN PUUVILLA OY—VASA BOMULL AB — Vasa
AB. BJORNEBORGS BOMULL — Bjorneborg
TAMMERFORS LINNE-OCH JERN-MANUFAKTUR AKTIE-BOLAG — Tampere

FRANCE

BLANCHIMENT, TEINTURE, IMPRESSION BOISSIERE FILS — Rouen
BLANCHISSERIE ET TEINTURERIE DE CAMBRAI — Cambrai
ETABLISSEMENTS RICHARD FRERES — Cholet
ETABLISSEMENTS GAILLIARD & CIE — Barentin
GILLET-THAON — Paris
TEINTURERIE, APPRETS GRASSIN DELYLE — Malaunay (Seine-Inf.)
GUERRY-DUPERAY & FILS — Roanne
MANUFACTURES HARTMANN & FILS — Munster (Ht.-Rhin)
LAINE FRERES — Rouen
TEINTURERIE G. ROQUETTE — Wasquehal
ETABLISSEMENTS SCHAEFFER & CIE — Pfastatt-le-Chateau (Ht.-Rhin)
SOCIETE ANONYME BLANCHISSERIE & TEINTURERIE DE CAUDRY — Ile Saint-Denise
SOCIETE ANONYME DE BLANCHIMENTS TEINTURES ET IMPRESSIONS — Lyon
SOCIETE GENERALE DES FILATURES ET TISSAGES DE FLERS — Flers
SOCIETE DES TEXTILES FRANCAIS — Paris
TEXTILE DU VERMANDOIS — Laval

FRENCH MOROCCO

INDUSTRIE COTONNIERE DE MAROC "ICOMA" S.A. — Fédala
LARCHER & CIE — Casablanca

FRENCH WEST AFRICA

INDUSTRIE COTTONIERE AFRICAINE "ICOTAF" S.A. — Dakar

GERMANY

GEBR. BOEGGERING, G.M.B.H. — Bocholt
GEBR. BURKHARDT — Pfullingen/Württ
MECH. BUNTWEBEREI BRENNET — Brennet
DRUCKEREI & APPRETUR BROMBACH A. G. — Brombach
M. VAN DELDEN & CO. — Gronau
CHRISTIAN DIERIG A. G. — Augsburg
BAUMWOLLINDUSTRIE ERLANGEN-BAMBERG A. G. — Erlangen
AUGUST GEIGER, KOMM. GES. — Kirchheim-Teck
ULRICH GMINDER, G.M.B.H. — Reutlingen
KOLB & SCHUELE A. G. — Kirchheim-Teck
VEREINIGTE WEBEREI SALZGITTER-STADTOLDENDORF (Wm. Kübler) — Stadtoldendorf
MARTINI & CIE — Augsburg
NIEHUES & DUETTING — Nordhorn
HEINRICH OTTO & SOEHNE — Wendlingen
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LUDWIG POVEL & CO. — Nordhorn
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J. SCHRUNDER & SOHNE — Greven
BLEICHEREI, FAERBEREI & APPRETUR-ANSTALT UHINGEN, A. G. — Uhingen
GEBRUEDER WENDLER G.M.B.H. — Reutlingen
AUSRUESTUNG AN DER WIESE G.M.B.H. — Brombach
HERMANN WINDEL, G.M.B.H. — Windelsbleiche
F. A. KUMPERS — Rheine an der Ems
MULFORTER ZUEGDRUCKEREI UND FARBEREI — Rheydt-Mülfort
B. RAWE & CO. — Nordhorn
G. SCHUEMER & CO. — Schuttorf/Hann
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GREAT BRITAIN

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T. R. Bridson & Sons Ltd. — Bolton Bleachworks, Bolton
Carey McClellan & Co., Ltd. — Ardmore Bleach Works, Londonderry, Northern Ireland
Eden & Thwaites, Ltd. — Edgeley Bleachworks, Stockport, Cheshire
Kirkpatrick Bros., Ltd. — Ballyclare, County Antrim, Northern Ireland
J. McHaffie & Son Ltd. — Kirktonfield, Neilston (near Glasgow), Scotland
River Etherow Bleaching Co., Ltd. — Hollingworth, Manchester
John Stanning & Son Ltd. — Leyland Bleachworks, Leyland, Preston
Sykes & Co. Ltd. — Edgeley Bleachworks, Stockport, Cheshire
John Whitehead of Elton Ltd. — Radcliffe Bleach Works, Radcliffe, nr. Manchester
BRADFORD DYERS' ASSOCIATION, LTD. — 39 Well Street, Bradford
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Ashenhurst Dyeing Co., Ltd., Ashenhurst Works — Blackley
John & Henry Bleackley Ltd. — Myrtle Grove, Prestwich
Adam Hamilton & Sons, Ltd., Blacklandmill — Paisley, Scotland
Lowmoor & Water Lane Ltd., Woodroyd Dye Works — Low Moor
Standish Co. Ltd. — Worthington nr. Wigan
J. CHADWICK & CO., LTD. — Springbrook Works, Oldham, Lancs.
CLIFTON MILLS, LIMITED — Poolstock Mills, Wigan, Lancs.
DEAKINS, LIMITED — Egerton Dye Works, nr. Bolton
DROMONA & MAINE LIMITED — Cullybackey, County Antrim, Northern Ireland
GLEN MILLS (COLNE) LIMITED — 2/4 Fountain St., Manchester 2
P. W. GREENHALGH & CO., LTD. — Ogden Mill, New Hey (nr. Rochdale) Lancs.
GROVE DYEING CO., LTD. — Littleborough, Lancs.
J. J. HADFIELD, LTD. — Garrison Bleach & Dye Works, Birch Vale
J. MANDLEBERG & CO., LTD. — Albion Works, Pendleton, Salford 6, Lancs.
THE PIN CROFT DYEING AND PRINTING CO., LTD. — Adlington, Lancs.
RAINSHORE BLEACHING & DYEING CO., LTD. — Norden, Lancs.
STEVENSON & SON, LTD. — Dungannon, Northern Ireland
TURNBULL & STOCKDALE LTD. — Rosebank Print Works, Ramsbottom, nr. Manchester
JOHN WALTON OF GLOSSOP, LTD. — Hollingworth, Cheshire
DAVID WHITEHEAD & SONS, LTD. — Lower Mill, Rawtenstall
YORKSHIRE DYEING & PROOFING COMPANY, LTD. — Spring Vale Works, Middleton, Lancs.
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VAN HEEK & CO., N. V. — Enschede
KONINKLIJKE STOOMWEVERIJ TE NIJVERDAL N. V. — Almelo
N. V. NEDERLANDSCHE STOOMBLEEKERIJ — Nijverdal
J. F. SCHOLTEN & ZONEN N. V. — Enschede
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In Plants as Follows:
The Bangalore Woollen, Cotton & Silk Mills Co., Ltd. — Bangalore 2, Mysore
The Buckingham & Carnatic Co., Ltd. — Madras
THE ARVIND MILLS, LTD. — Ahmedabad
SHRI AMBICA MILLS LTD. — Ahmedabad
AHMEDABAD MANUFACTURING & CALICO PRINTING CO., LTD. — Ahmedabad
KOHINOOR MILLS COMPANY LTD. — Bombay
SARANGPUR COTTON MANUFACTURING CO., LTD. — Ahmedabad
THE NEW SHORROCK SPG. & MFG. CO., LTD. — Nadiad, Bombay State
ROHIT MILLS LIMITED — Ahmedabad
THE AHMEDABAD JUPITER WVG. & MFG. CO., LTD. — Ahmedabad
THE ARYODAYA GINNING & MFG. CO. LTD. — Ahmedabad
THE NEW COMMERCIAL MILLS CO., LTD. — Ahmedabad

ISRAEL

KURDANEH TEXTILE WORKS, LTD. — c/o "Ata" Textile Co., Ltd., Haifa

ITALY

COTONIFICIO CANTONI — Legnano
MANIFATTURA BERNARDO CAPROTTI — Albiate

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COTONIFICIO LEGLER S.A. ..... Bergamo
MANIFATTURE COTONIERE MERIDIONALI ..... Napoli
REGGIANI MANIFATTURA, S.A. ..... Bergamo
TEXTILOSES & TEXTILES S.A. ..... Milano
MANIFATTURA TOSI ..... Busto Arsizio
UNIONE MANIFATTURE S.A. ..... Parabiago
COTONIFICIO VALE DI SUSA ..... Torino

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TOYO SPINNING CO., LTD. ..... Osaka
KANEGAFUCHI SPINNING CO., LTD. ..... Osaka
NISSHIN COTTON SPINNING CO., LTD. ..... Tokyo
KUREHA SPINNING CO., LTD. ..... Osaka
TOYO SEN-I CO., LTD. ..... Tokyo
FUJI SPINNING CO., LTD. ..... Tokyo
HAMAGUCHI DYEING WORKS, LTD. ..... Kyoto
ICHISHIN BLEACHING CO., LTD. ..... Osaka, Pref.
YAMATOGAWA DYEING WORKS, LTD. ..... Sakai, Osaka
DAIDO DYEING COMPANY, LTD. ..... Kyoto
KURASHIKI COTTON SPINNING CO., LTD. ..... Osaka
NITTO SPINNING CO., LTD. ..... Tokyo

LEBANON

ARIDA BROTHERS CORPORATION ..... Tripoli, Lebanon

MEXICO

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ATOYAC TEXTIL, S.A. ..... Puebla, Puebla
CIA. INDUSTRIAL TEXTIL ANAHUAC, S.A. ..... Puebla, Puebla
CIA. INDUSTRIAL MANUFACTURERA DE ATLIXCO, S.A. ..... Atlixco, Puebla
CIA. INDUSTRIAL DE PARRAS, S.A. ..... Parras, Coahuila
CIA. INDUSTRIAL DE SAN ANTONIO ABAD, S.A. ..... Mexico, D.F.
CIA. INDUSTRIAL VERACRUZANA, S.A. ..... Ciudad Mendoza, Ver.
EL GLOBO, S.A. ..... Atzcapotzalco, Mexico, D.F.
ELSA, S.A. ..... Coyoacan, Mexico, D.F.
LA CAROLINA Y REFORMA, S.A. ..... Mexico, D.F.
NACIONAL TEXTIL MANUFACTURERA, S.A. ..... Guadalajara, Jalisco
TEXTILES MONTERREY, S.A. ..... Monterrey, N. L.

NORWAY

TEKSTILFOREDLING A/S-TEFAS ..... Oslo
A/S DALE FABRIKKER ..... Bergen

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COMPANIAS UNIDAS VITARTE, VICTORIA, INCA, S.A. ..... Lima
FABRICA DE TEJIDOS "LA UNION" LTDA. ..... Lima

SOUTH AFRICA

BERG RIVER TEXTILES LIMITED ..... Cape Town

SOUTHERN RHODESIA

DAVID WHITEHEAD & SONS (RHODESIA) LIMITED ..... Hartley

SPAIN

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FIBRACOLOR, S.A. ..... Barcelona
VIUDA DE JOSE TOLRA, S.A. ..... Barcelona
COMMERCIAL ANONIMA VILA ..... Barcelona

SWEDEN

ALINGSAS BOMULLSVAFVERI AKTIEBOLAG ..... Alingsas
BORAS WAEFVERI AKTIEBOLAG ..... Boras
GAMLESTADENS FABRIKERS AKTIEBOLAG ..... Goeteborg
GEFLE MANUFAKTUR AKTIEBOLAG (Hargskoncernen) ..... Stroemsbro
MANUFAKTUR AKTIE BOLAGET I MALMOE ..... Malmoe
MOELNLYCKE VAEFVERIAKTIEBOLAG ..... Goeteborg
NORRKOEPINGS BOMULLSVAEFVERI A. B. ..... Norrkopings

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A. G. FEHLMANN SOEHNE ..... Schoftland
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HABIS-TEXTIL A. G. ..... Flawil
HEBERLEIN & CO., A. G. ..... Wattwil
AKTIENGESELLSCHAFT A. & R. MOOS ..... Weisslingen
R. MUELLER & CIE. A. G. ..... Seon
RADUNER & CO., A. G. ..... Horn
STOFFEL & CO. ..... St. Gallen
AKTIENGESELLSCHAFT CARL WEBER ..... Winterthur

UNITED STATES

ALABAMA MILLS, INC. ..... Wetumpka, Ala.
AMERICAN FINISHING COMPANY ..... Memphis, Tenn.
THE APPONAUG COMPANY ..... Apponaug, R. I.
ARISTA MILLS CO. ..... Winston-Salem, N. C.
ARMS TEXTILE MANUFACTURING CO. ..... Manchester, N. H.
ASPINOOK CORPORATION ..... Adams, Mass.
ASPINOOK CORPORATION ..... Jewett City, Conn.
AURORA BLEACHERY, INC. ..... Aurora, Ill.
AVONDALE MILLS ..... Alexander City, Ala.
AVONDALE MILLS ..... Pell City, Ala.
AVONDALE MILLS ..... Sylacauga, Ala.
JOS. BANCROFT & SONS CO. ..... Wilmington, Del.
BELLMAN BROOK BLEACHERY CO. ..... Fairview, N. J.
BRADFORD DYEING ASSOCIATION (USA) ..... Westerly, R. I.
BROWN MANUFACTURING CO. ..... Concord, N. C.
BURLINGTON MILLS CORP., Cramerton Mills Div. ..... Cramerton, N. C.
CANNON MILLS COMPANY ..... Kannapolis, N. C.
CANTON COTTON MILLS ..... Canton, Ga.
CHICOPEE MANUFACTURING CORPORATION ..... Chicopee Falls, Mass.
CLEARWATER FINISHING PLANT ..... Clearwater, S. C.
COLD SPRING BLEACHERY, INC. ..... Yardley, Pa.
CONE MILLS CORPORATION—Print Works Plant ..... Greensboro, N. C.
CONE MILLS CORPORATION—White Oak Plant ..... Greensboro, N. C.
CONE MILLS CORPORATION—Proximity Plant ..... Greensboro, N. C.
CONE MILLS CORPORATION—Revolution Division ..... Greensboro, N. C.
CONE MILLS CORPORATION—Salisbury Plant ..... Salisbury, N. C.
CONE MILLS CORPORATION—Minneola Plant ..... Gibsonville, N. C.
CONSOLIDATED TEXTILE CO.—Taunton Div. ..... Taunton, Mass.
CONSOLIDATED TEXTILE CO.—Windsor Print Div. ..... No. Adams, Mass.
CRANSTON PRINT WORKS COMPANY ..... Cranston, R. I.
CRANSTON PRINT WORKS COMPANY ..... Webster, Mass.
CRANSTON PRINT WORKS COMPANY ..... Fletcher, N. C.
CROMPTON-SHENANDOAH CO. ..... Waynesboro, Va.
CRYSTAL SPRINGS BLEACHERY ..... Chickamauga, Ga.
DAN RIVER MILLS, INCORPORATED ..... Danville, Va.
DEMPSEY BLEACHERY & DYE WORKS CORP. ..... Pawtucket, R. I.
ERWIN MILLS INCORPORATED ..... Cooleemee, N. C.
ERWIN MILLS INCORPORATED ..... Erwin, N. C.
ERWIN MILLS INCORPORATED ..... Stonewall, Miss.
EUREKA PRINTING CO., INC. ..... Clifton, N. J.
EXETER MANUFACTURING COMPANY ..... Exeter, N. H.
FAIRFOREST COMPANY—Eagle & Phenix Division ..... Columbus, Ga.
FAIRFOREST COMPANY—Fairforest Fin. Div. ..... Spartanburg, S. C.
FIELDCREST MILLS, INC. ..... Spray, N. C.
FRUIT OF THE LOOM, INC.—Pontiac Finishing Plant ..... Pontiac, R. I.
GLENLYON PRINT WORKS ..... Phillipsdale, R. I.
GOLD-TEX FABRICS CORP.—Mill Division ..... Rock Hill, S. C.
GOODALL-SANFORD, INC. ..... Sanford, Maine
GRANITEVILLE COMPANY—Gregg Division ..... Graniteville, S. C.
GRANITEVILLE COMPANY—Sibley-Enterprise Division ..... Augusta, Ga.
GREAT FALLS BLEACHERY & DYE WORKS, INC. ..... Somersworth, N. H.
HAMPTON MILLS, INC. ..... Easthampton, Mass.
HARTSVILLE PRINT & DYE WORKS ..... Hartsville, S. C.
HIGHLAND PARK MANUFACTURING CO. ..... Charlotte, N. C.
JEFFERSON MILLS ..... Jefferson, Ga.
KERR BLEACHING & FINISHING WORKS, INC. ..... Concord, N. C.
KING PHILIP FINISHING CO. ..... Lonsdale, R. I.
LANETT BLEACHERY & DYE WORKS ..... West Point, Ga.
LANE COTTON MILLS COMPANY (Div. M. Lowenstein & Sons) ..... New Orleans, La.
LOCKWOOD-DUTCHESS, INC. ..... Waterville, Me.
LOWELL BLEACHERY, INC. ..... St. Louis, Mo.
LOWELL BLEACHERY SOUTH ..... Griffin, Ga.
ANDREW Y. MICHIE & SONS CO. ..... Philadelphia, Pa.
THE MILLVILLE MANUFACTURING CO. ..... Millville, N. J.
MOORESVILLE MILLS ..... Mooresville, N. C.
NATIONAL DYEING & FINISHING CORP. ..... Culver City, Calif.
NEW BRAUNFELS TEXTILE MILLS ..... Ne Braunfels, Texas
NEWBURGH BLEACHERY ..... Newburgh, N. Y.
NEW YORK MILLS DIV. (A. D. Juilliard) ..... New York Mills, N. Y.
NORTH CAROLINA FINISHING COMPANY ..... Salisbury, N. C.
PACIFIC MILLS ..... Lyman, S. C.
PACOLET MANUFACTURING CO. ..... New Holland, Ga.
PEPPERELL MANUFACTURING COMPANY ..... Lewiston, Me.
PEPPERELL MANUFACTURING COMPANY ..... Lindale, Ga.
PEPPERELL MANUFACTURING CO.—Alabama Div. ..... Pepperell, Ala.
PILOT MILLS CO. ..... Raleigh, N. C.
PLYMOUTH FINISHING CO., INC. ..... Fall River, Mass.
PURITAN LOOMS, INCORPORATED ..... Philadelphia, Pa.
QUEEN PRINT WORKS, INC. ..... Providence, R. I.
THE RANDOLPH MILLS, INC. ..... Franklinville, N. C.
RENFREW BLEACHERY (The Abney Mills) ..... Travellers Rest, S. C.
RIEGEL TEXTILE CORPORATION—Ware Shoals Division ..... Ware Shoals, S. C.
RIEGEL TEXTILE CORPORATION—Trion Division ..... Trion, Ga.
ROANOKE MILLS COMPANY—Mill No. 1 ..... Roanoke Rapids, N. C.
ROBERTSON BLEACHERY & DYE WORKS ..... New Milford, Conn.
ROCK HILL PRINTING & FINISHING CO. ..... Rock Hill, S. C.
THE ROCKLAND BLEACH & DYE WORKS CO. ..... Baltimore, Md.
THE RUSSELL MFG. CO., INC. ..... Alexander City, Ala.
SAYLES-BILTMORE BLEACHERIES, INC. ..... Biltmore, N. C.
SAYLES FINISHING PLANTS, INC. ..... Saylesville, R. I.
PHILIP L. SHEERR & SONS ..... Frankford, Philadelphia, Pa.
SLATERSVILLE FINISHING CO., (Division of Kendall Mills) ..... Slatersville, R. I.
SOUTHERN BLEACHERY & PRINT WORKS, INC. ..... Taylors, S. C.
THE SPRINGS COTTON MILLS (Grace Bleachery) ..... Lancaster, S. C.
STANDARD BLEACHERY & PRINTING CO., INC. ..... Carlton Hill, N. J.
J. P. STEVENS & CO., INC.—Cotton & Spun Fibers Div., Appleton Plant ..... Anderson, S. C.
J. P. STEVENS & CO., INC.—Delta Company Division ..... Cheraw, S. C.
J. P. STEVENS & CO., INC.—Industrial Cotton Mills Co. Div. ..... Rock Hill, S. C.
J. P. STEVENS & CO., INC.—Utica & Mohawk Cotton Mills Div. ..... Clemson, S. C.
J. L. STIFEL & SONS, INC. ..... Wheeling, W. Va.
SUMMERDALE DYE WORKS ..... Holmesburg, Phila., Pa.
SWIFT MANUFACTURING COMPANY ..... Columbus, Ga.
TEXAS TEXTILE MILLS ..... McKinney, Texas
TEXAS TEXTILE MILLS ..... Waco, Texas
TEXTRON INC.—Finishing Plant ..... Anderson, S. C.
THOMASTON MILLS—Beachery Div. ..... Thomaston, Ga.
UNCAS PRINTING & FINISHING CO., INC. ..... Mechanicsville, Conn.
UNION BLEACHERY ..... Greenville, S. C.
THE UNITED STATES FINISHING COMPANY ..... Norwich, Conn.
WERTHAN BAG CORPORATION ..... Nashville, Tenn.
WHITE BROTHERS, INC. ..... Winchendon Springs, Mass.
YATES BLEACHERY CO. ..... Fintstone, Ga.

URUGUAY

S. A. FABRICA URUGUAYA DE ALPARGATAS ..... Montevideo

VENEZUELA

C. A. TELARES DE MARACAY ..... Maracay (Aragua)

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Now and Years from Now!

TYPE CL PUMP FOR CLEAR WATER OR FOR A VARIETY OF CHEMICALS

Widely used for zone air conditioning, circulation and agitation as well as handling many corrosives, this single suction pump stands up under hard service. Notice the large ball bearing with its oversize oil reservoir. The shaft, as you can see, is proportionately oversized. The efficient impeller, too, is built to take the shocks incident to many of today's services. In fact, from the rugged stand to the solid-shell clear-passage casing, there isn't a flimsy or unproven feature—and that's why "Buffalo" users are enjoying pumping satisfaction 10, 20, 30 and more years after installation. It's what we at "Buffalo" call the "Q" Factor*. For details on Type CL Pumps, *write today for Bulletin 976D.*

It may be that you need a *double* suction pump—a multistage pump—sump pumps—non-clogging pumps, or other designs. "Buffalo" builds all types . . . all with this same "Q" Factor*. Your nearby "Buffalo" factory trained engineer will give you expert advice and information to help you solve any pumping problem . . . to satisfaction.

*The "Q" Factor—the built-in Quality which provides trouble-free satisfaction and long life.

"Buffalo" PUMPS

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Canada Pumps, Ltd., Kitchener, Ontario
Sales Representatives in all Principal Cities

A BETTER CENTRIFUGAL PUMP FOR EVERY LIQUID

Personal NOTES ABOUT MEN YOU KNOW

chairman; **Nelson F. Getchell,** secretary; **Suzanne Davison,** assistant secretary; **Louis R. Mizell,** treasurer; and **Lawrence Heffner,** councilor.

Joining Wilco Hosiery Mills, Inc., Helen, Ga., as vice-president is **Leon Brumberger,** recently resigned from Exeter Hosiery Mills, Inc., Long Island City.

Recent promotions at Opelika (Ala.) Mfg. Co. include **Charles L. Cohen** to board chairman, **Herbert B. Snower** to president, **Herman A. Berns** to executive vice-president, and **T. Holmes Floyd** to vice-president.

Frank Diedrich has resigned as general manager of Dodgeville (Mass.) Finishing Co., Inc., and is succeeded by **Fred B. Hirsch,** who will continue his duties as treasurer.

New vice-presidents at Rock Hill (S. C.) Printing and Finishing Co. are **Joseph H. Easley,** assistant general manager, and **J. J. Adams,** superintendent.

C. V. Elrod is now superintendent of Osage Mfg. Co., Bessemer City, N. C., replacing **J. B. Cornwell,** who has resigned to become superintendent of Mills Mill, Saxon Plant, Spartanburg, S. C. **Hilbert Divine** is new overseer of preparation at Osage.

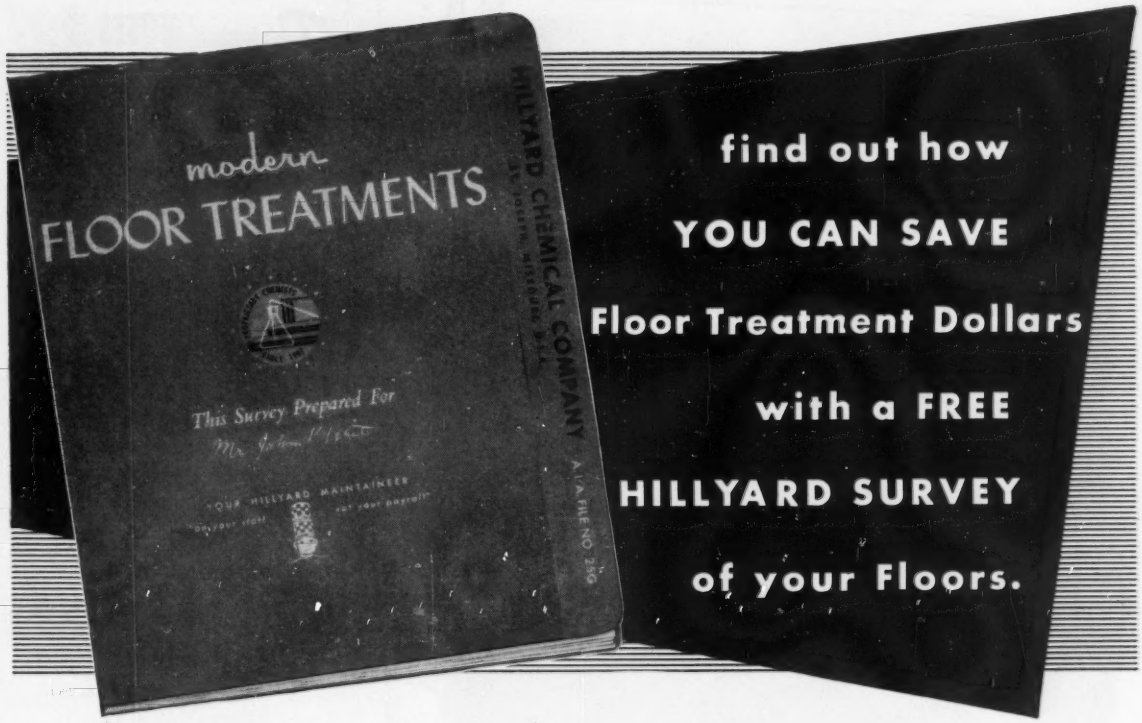
Robert F. German has been elected secretary of Charlottesville (Va.) Woolen Mills, Inc. **Herbert J. Smith, Jr.,** president of the company, has also assumed the duties of treasurer.

New vice-president of Frank Ix & Sons is **Gardiner Hawkins.**

Leon G. Hazebrouck has resigned as superintendent of the combing division of French Worsted Co., Woonsocket, R. I.

Barton R. Heinz has been named a director of Brookline Fabrics, Inc., producer of tapestries, textures, and metallics for the upholstery trades, and also for its division, Southern Pile Fabric Co., of Greenville, S. C., producer of pile fabrics, nylon face friezes, and textured frieze novelties.

Raymond E. Henderson has been appointed director of manufacturing operations at Chatham Mfg. Co., Elkin, N. C., replacing **R. W. Harris** who has resigned because of health.



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Personal NOTES ABOUT MEN YOU KNOW

Mr. Henderson, who previously held positions at Bibb Mfg. Co., Graniteville Co., Dan River Mills, and Goodall-Sanford, is responsible for all phases of manufacturing in Chatham's Elkin plants, including apparel fabrics and automotive fabrics, as well as blankets.

R. R. King III has been named assistant manager at Cone Mills Corp.'s Granite Plant at Haw River, N. C. **Manual Williamson,** overseer of the finishing department, also serves as assistant to plant manager and superintendent P. C. Beatty.

Newly elected as 13th president of the American Association of Textile

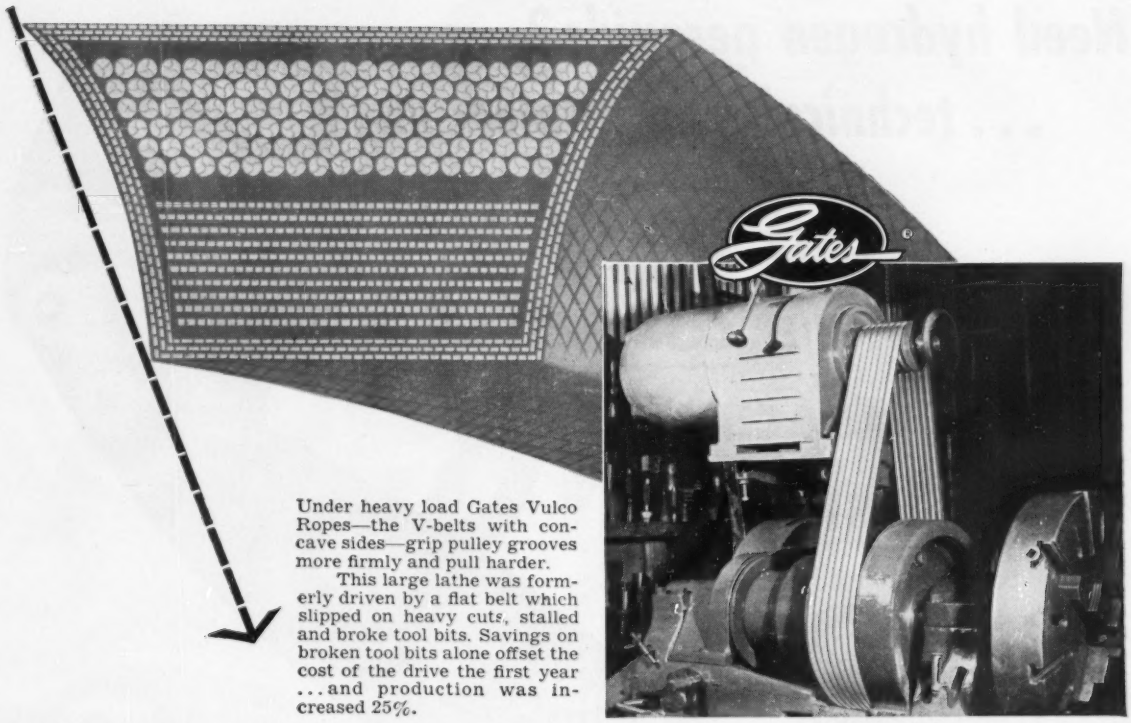
Mr. Jacoby

Chemists and Colorists is **Raymond W. Jacoby,** technical consultant for the Ciba Co.

W. Marion Kirby, Jr., formerly superintendent of Wade Mfg. Co., Wadesboro, N. C., has been named superintendent of Wennonah Cotton Mills Co., Lexington, N. C., succeeding **David J. Crowell.**

Officers of Textron-American, Inc., formed by the merger of Textron, Inc., American Woolen Co., and Robbins Mills, Inc., include **Royal Little,** board chairman; **Robert L. Huffines, Jr.,** president; **Joseph B. Ely,** chairman of the executive committee, **William D. Mewhort,** vice-president and treasurer; and **Harry J. Burkart, Laurence C. Plowman,** and **Robert C. Thurber,** vice-presidents.

The following new appointments have been made in connection with the transfer of scatter rug operations from the Valway Plant to the Calumet Plant of Callaway Mills Co., LaGrange, Ga.: **S. P. Rice,** general superintendent, Calumet and Valway Plants; **J. M. Blackman,** superintendent, Calumet; **H. H. Lewis,** superin-



Under heavy load Gates Vulco Ropes—the V-belts with concave sides—grip pulley grooves more firmly and pull harder.

This large lathe was formerly driven by a flat belt which slipped on heavy cuts, stalled and broke tool bits. Savings on broken tool bits alone offset the cost of the drive the first year ...and production was increased 25%.

Concave sides keep belt costs down!

Industry is saving thousands and thousands of dollars every year by specifying Gates Vulco Ropes—the V-Belts with *concave sides* (U.S. Pat. No. 1813698).

Here's the interesting reason *why* Gates belts save money:

On the bend around the sheave the *precisely engineered* concave sides (Fig. 1) of the Gates belt fill out and become straight (Fig. 1-A). Thus the belt makes uniform contact with the sides of the pulley. That means sure pulling power and *even distribution of wear*. Longer wear, fewer replacements cut belt costs...reduce down time...contribute to profits.

Simple test proves value of concave sides

Bend a straight-sided belt (Fig. 2) and feel the sides *bulge out* around the bend. The bulging sides prevent the belt from fitting evenly in the pulley groove (Fig. 2-A). Uneven contact causes uneven wear...shortens belt life...increases costs.

Keep belt costs *down* by specifying Gates Vulco Rope Drives—the V-Belt with *concave sides*. Belts you need are readily available from nearby distributor stocks. The Gates Rubber Company, Denver, Colorado—*World's Largest Maker of V-Belts.*

Gates Engineering Offices and Distributor Stocks are located in all industrial centers of the United States and Canada, and in 70 other countries throughout the world.

TPA 25-A

GATES VULCO ROPE DRIVES

Need hydrogen peroxide?
. . . technical help in bleaching?

CALL ON DU PONT'S COMPLETE BLEACHING SERVICE

Whatever you bleach—wool, cotton, rayon, synthetics or blends—Du Pont's *complete* textile bleaching service is especially designed to help you maintain peak efficiency. Here's what the pioneer in the field offers you:

TOP QUALITY HYDROGEN PEROXIDE. Prompt, dependable delivery of "Albone"* hydrogen peroxide—in drums, tank trucks, and tank car lots—is assured from Du Pont's modern manufacturing plants located near northern and southern textile centers.

ON-THE-SPOT HELP with any immediate bleaching problem from Du Pont textile specialists servicing all important textile centers.

PEROXIDE BLEACHING SYSTEMS. Proven efficiency is the reason why more Du Pont peroxide bleaching systems are in use throughout the world than any other continuous system! Du Pont will be glad to show you how these processes can be adapted to suit *your* bleaching needs.

TECHNICAL BULLETINS AND BOOKLETS. A wealth of up-to-date information on all phases of textile bleaching is always available for your use. Reference copies of literature pertinent to your bleaching operations are yours on request.

SPECIAL MODERNIZATION SERVICE to help you in your plant improvement or expansion program—including equipment and process recommendations. After installation of equipment, Du Pont will help you get the most from your investment.

CONFIDENTIAL BLEACHERY SURVEY. Du Pont's wide experience and modern research facilities go to work for you when you request a survey of your bleaching operation. A *confidential* report summarizes results and recommendations for your guidance in maintaining or improving bleaching efficiency.

For a *complete* textile bleaching service, call your Du Pont representative or write: E. I. du Pont de Nemours & Co. (Inc.), Electrochemicals Department, Wilmington 98, Del. TI-2

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HYDROGEN PEROXIDE

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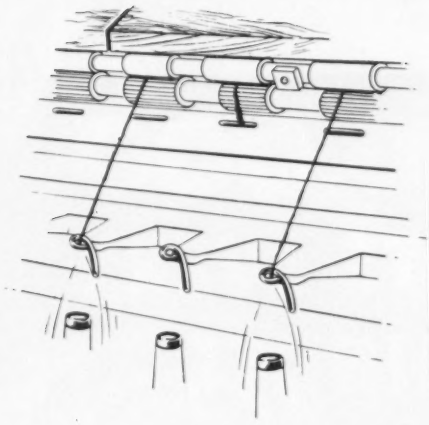
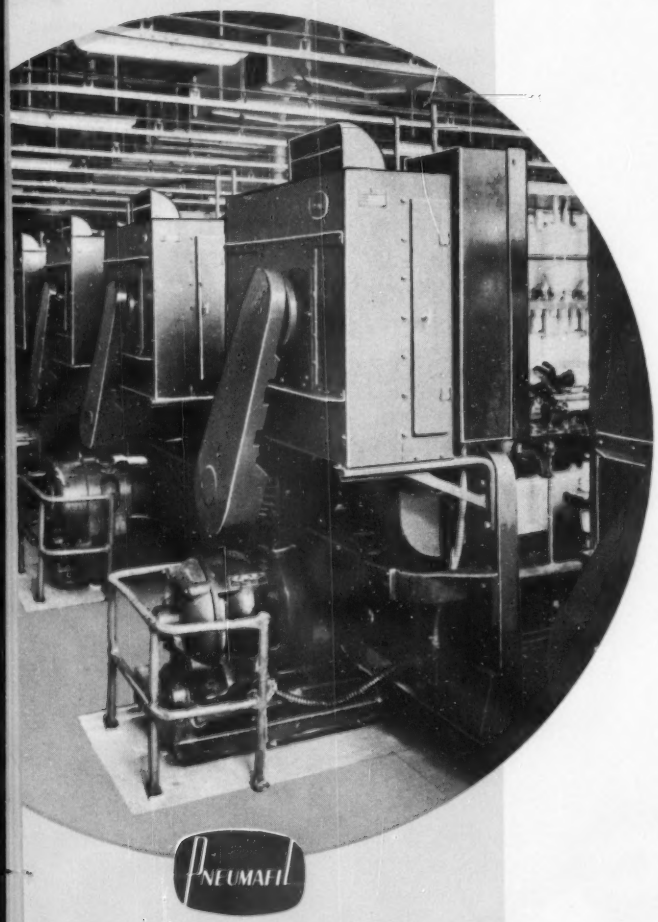
BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*



PNEUMAFIL*

lowers manufacturing cost 4 ways



- **Reduces labor cost . . .** spinner assignments are increased more than 30% because the job is better organized and there is a decrease in non-productive walking and patrolling.
- **Reduces ends down . . .** ends broken by other ends are eliminated . . . there is less fly; therefore, fewer slubs to break ends at the traveler. 30% reduction is not unusual.
- **Reduces waste . . .** collected waste is "air-opened" and loose . . . "waste machine" processing is not needed . . . Pneumafil* collected fiber is "premium grade" and is re-run by mills in their regular mix.
- **Reduces cleaning costs . . .** Pneumafil* collects 50% of the fibers from the air and drafting area . . . Pneumafil* equipped frames are cleaner frames . . . Pneumafil* equipped mills are cleaner mills.

These four cost cutting features plus the assurance of better quality yarn make . . .

PNEUMAFIL* the best investment you can make!

PNEUMAFIL CORPORATION

CHARLOTTE 8, NORTH CAROLINA

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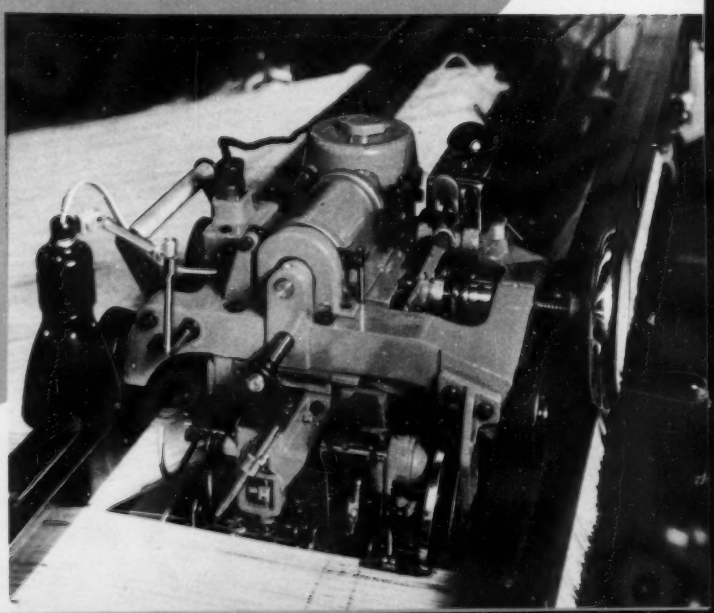
Efficiently tying cotton, wool, silk, worsted, synthetics, blends, flax, plastic, jute, and even human hair... in counts ranging from the heaviest cotton duck to the finest denier nylon filament.

Only with Uster do you get... a tried and proven machine... years of experience with the "Uster system"... better know-how... good delivery... excellent operator training... and dependable service by factory trained technicians ... that is why...

THE TREND IS TO USTER

USTER CORPORATION
CHARLOTTE 8, NORTH CAROLINA

Sales Offices: Needham Hts., Mass.—Greenville, S. C.
In Canada: Hugh Williams & Co., 47 Colborne Street, Toronto, Ontario



FOR IMPROVED WHITES

DERGOPAL®
fluorescent whitening agents

- *substantive*
- *efficient*
- *economical*
- *liquid - easy to use*

DERGOPAL C

for WOOL, NYLON and ACETATE. Effective for processing top, stock, yarn and piece goods. Produces sharper contrast between white and colored patterns in checks, plaids and tweeds. Eliminates yellow cast of wool and synthetic fibers.

DERGOPAL D

used in the same manner as Dergopal C and for the same fibers and fabrics when a definite BLUE-WHITE is required.

DERGOPAL G

for use under strong acid conditions as in CARBONIZING or ACID FELTING of WOOL.

DERGOPAL B

for COTTON, RAYON and CELLULOSIC MATERIAL as an after-treatment. Also useful in bleaching, often allowing reduction of the amount of bleach in the bath.

DERGOPAL BX

used in the same manner as Dergopal B and for the same fibers and fabrics when a definite BLUE-WHITE is required.

DERGOPAL FP

for special use on COTTON and RAYON in FLAMEPROOFING compounds which tend to yellow the fabric. Applied in same bath. Particularly successful in conjunction with Arko Flameproofing Compound A S.

AC INC

for technical information write:

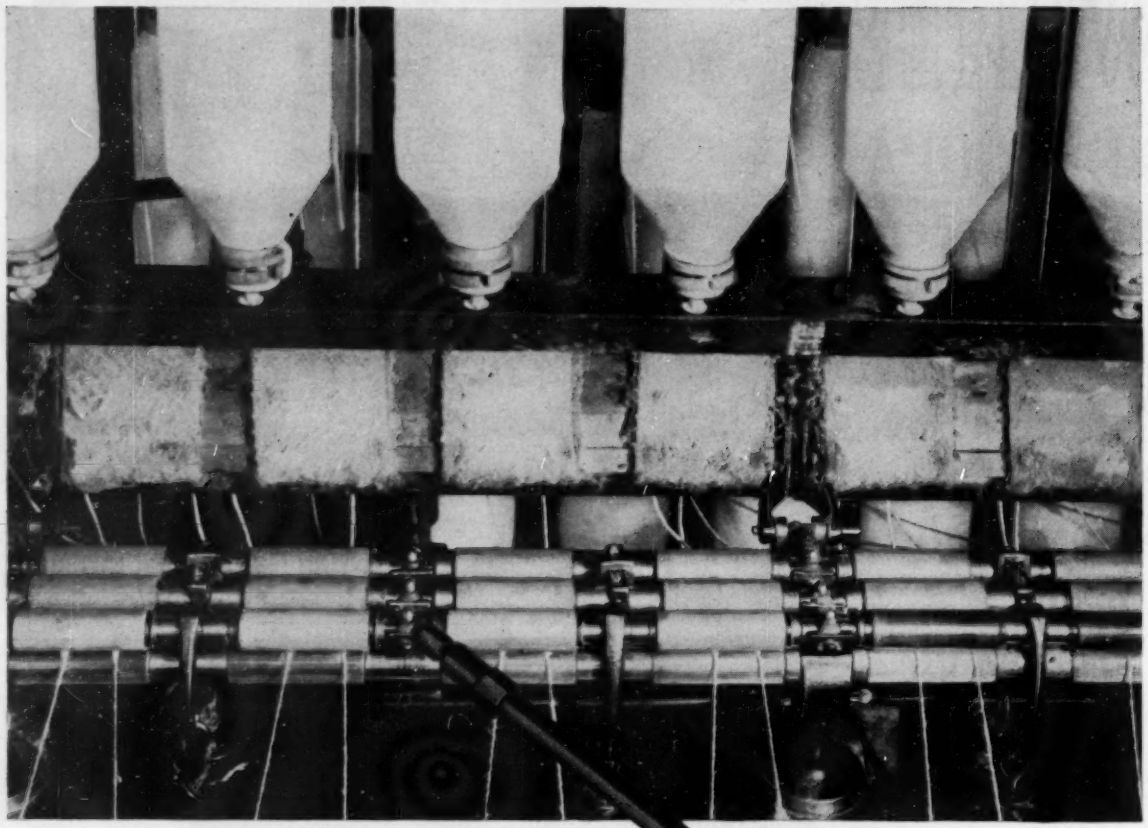
ARKANSAS CO., INC.

Serving the Textile Industry for over 50 Years

NEWARK, NEW JERSEY

For further information use Handy Return Card, Page 187

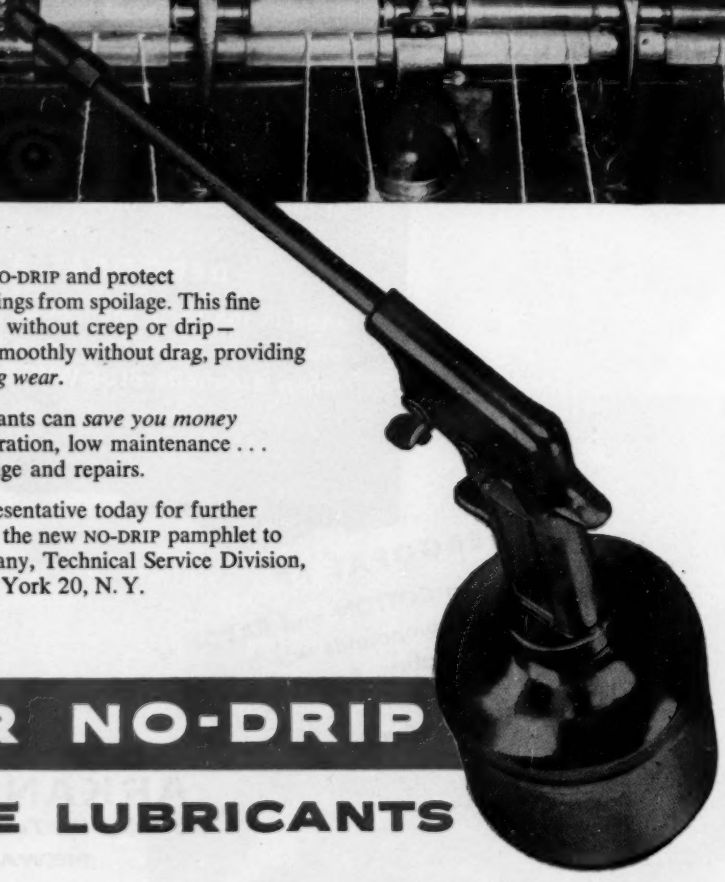
WON'T DRIP!



Switch now to Sinclair NO-DRIP and protect your yarn and roll coverings from spoilage. This fine lubricant *stays in place*, without creep or drip—permitting rolls to turn smoothly without drag, providing even draft . . . and *saving wear.*

Sinclair NO-DRIP Lubricants can *save you money* by assuring smooth operation, low maintenance . . . eliminating costly spoilage and repairs.

Call your Sinclair Representative today for further information or write for the new NO-DRIP pamphlet to Sinclair Refining Company, Technical Service Division, 600 Fifth Avenue, New York 20, N. Y.
There's no obligation.



SINCLAIR NO-DRIP
TEXTILE LUBRICANTS

Stainless steel Humiducts never need painting;
Modulating humidistat gives new precision in control;
Oversize recirculated air screens drastically cut cleaning!

Long-time newsmakers for efficiency and economy, Bahnson Humiducts now set new standards of performance, cut owning and operating costs to new lows. Three important features make this possible.

1 **New stainless steel ductwork,** at the same price as copper, is highly reflective — gives lighter, brighter rooms for peak production. Its lifetime non-corroding surface needs no painting, little maintenance . . . cuts interior and exterior cleaning time and frequency to a minimum.

2 **New modulating control** replaces on-off control. Extra-sensitive humidistats instantly respond to the slightest change in relative humidity — gradually open and close water valves to provide moisture in the exact amount required. Never too much — never too little.

3 **New oversize recirculated air screens** more than triple the effective screen area. One mill reports cleaning cut from twice per shift to two-day interval. Can be added to existing Humiducts at nominal cost!

These really significant new features, coupled with time-proved advantages of greater flexibility, lower operating cost, and elimination of expensive apparatus houses, make Humiducts a better-than-ever choice for efficiency and economy in textile air conditioning.

I will gladly send a comparative cost analysis showing the outstanding economy of Humiducts, together with factual information proving the superior conditions maintained by this system in many mills, if you will drop me a card or letter.

Sincerely yours,

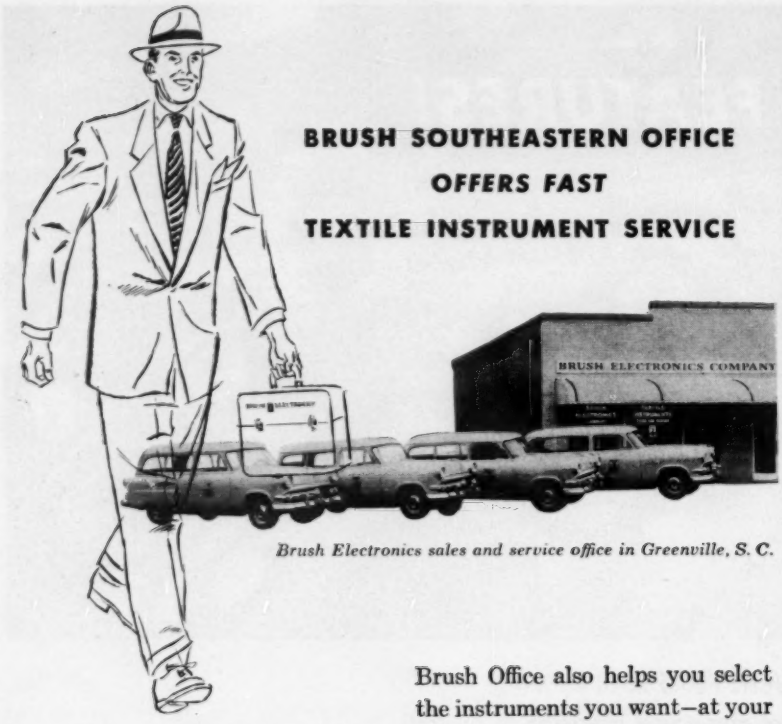
Agnew H. Bahnson, Jr.
President

Bahnson
COMPANY
WINSTON-SALEM, N. C.

AIR CONDITIONING • HUMIDIFICATION • CLEANING

91 OF THE TOP 100

Of the 100 top textile manufacturing firms in the nation, 91 are users of Bahnson equipment . . . a record of preference that is high testimony to Bahnson engineering skill.



BRUSH SOUTHEASTERN OFFICE OFFERS FAST TEXTILE INSTRUMENT SERVICE

Brush Electronics sales and service office in Greenville, S. C.

THE high performance you expect from precision Brush Textile Instruments is backed by a fully-staffed sales and service office at Greenville, S. C. serving the southeastern area. Trained servicemen and a local stock of parts assure fast service when required. The Brush Office also helps you select the instruments you want—at your request Brush Instruments can be demonstrated *on the job* in your mill.

For complete information on instruments for textile measurements, contact Brush Electronics Company, 91 Cleveland Street, Greenville, S. C., telephone 5-4079 or Dept. T-2, 3405 Perkins Avenue, Cleveland 14, Ohio.

Uniformity Analyzer*: *speeds checking and grading the uniformity of yarn, roving and sliver. Tests up to 1000 feet of yarn in less than 4 minutes.*

Tension Analyzer*: for rapid measurements of tension levels and tension variations.

Imperfection Counter: accurately counts the number of neps and other imperfections in yarn.

Lap Tester: for testing longitudinal and lateral variations of picker laps.

*Trade-Mark

BRUSH ELECTRONICS COMPANY

INDUSTRIAL AND RESEARCH INSTRUMENTS
PIEZO-ELECTRIC MATERIALS • ACOUSTIC DEVICES
MAGNETIC RECORDING EQUIPMENT
ULTRASONIC EQUIPMENT

BRUSH ELECTRONICS

formerly
The Brush Development Co.
Brush Electronics Company
is an operating unit of
Clevite Corporation.

Personal NOTES ABOUT MEN YOU KNOW

tendent, Valway; **J. H. Thompson,** assistant superintendent, Valway; **R. J. Willis,** production supervisor, Calumet; **Curtis Lindsey,** production supervisor, Valway; **E. F. O'Neal** and **M. M. Pollard,** overseers, Valway; and **W. N. Walls, W. C. Middlebrooks, Fred Hunter,** and **Homer Pitts,** overseers, Calumet. The Valway Plant will continue to devote its production to carpeting. * * * The Rockweave unit of the company, which produces laundry textiles, has been transferred from the Calumet Plant to the Manchester (Ga.) Plant. The following new appointments have been made in this connection: **J. C. Driver,** overseer, Rockweave; **Bob Walburn,** assistant overseer, Rockweave; **Harold Jackson,** billing supervisor, Rockweave; and **J. W. Foster,** production supervisor, Manchester.

John J. Smith, who has been acting as general manager of the non-

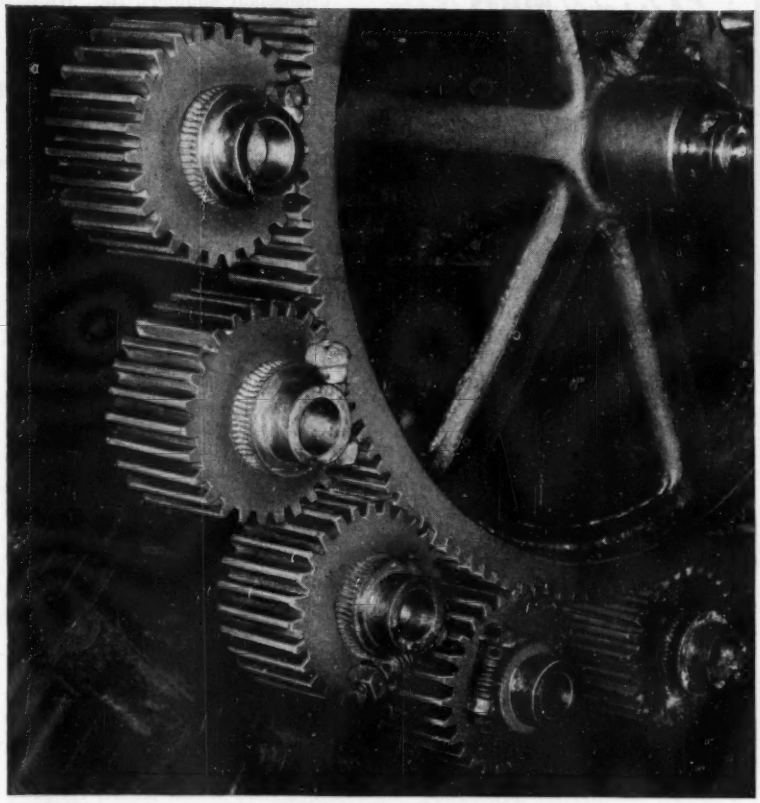
Mr. Smith

woven fabrics division of Chicopee Mfg. Corp., has been elected a vice-president of the company.

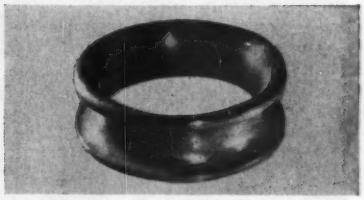
William B. Lewis has been appointed chief engineer of Bates Mfg. Co., Lewiston, Me., succeeding **John Murphy,** retired. **William T. Harvey** replaces Mr. Lewis as plant engineer for the company's Edwards Division.

Albert Wolguss was honor guest at a testimonial dinner, Dec. 18, at Cherry Hill Inn, Haddonfield, Pa. Mr. Wolguss was presented a gold watch by his friends in appreciation for more than 50 years of service in the textile field. He is retiring from active connection with La Pierre Yarn Sales, selling organization for Lorraine Yarn Mills, Inc., but will continue to serve in a consultant capacity.

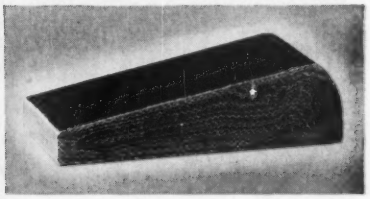
The Alabama State Chamber of Commerce has re-elected **Thomas D. Russell,** president of Russell Mfg. Co.,



REDUCE WEAR on large metal gears and reduce noise in textile printing machines with the use of C-D-F Celoron plastic gears. Prior to this use of Celoron, metal gears had to be replaced after twelve to fourteen months' operations. Since installing nine C-D-F Celoron gears over a year ago, there has been no wear on the main gear, no replacement of the C-D-F Celoron gears. Some other applications are still giving excellent service after five years!



ELIMINATE CORROSION, resist wear with C-D-F Celoron pot-eyes for bleachery applications. This low-cost molded product is extremely smooth and strong, has excellent resistance to high heat, moisture, abrasion.



INCREASE MACHINE EFFICIENCY with special C-D-F loom parts. This C-D-F parallel plug has high impact strength, is impervious to oil and water. It does not fracture, chip, delaminate. Two years' life is common.

SAVE MATERIALS with superior C-D-F Roving Cans. For running synthetics, C-D-F makes a rolled fibre rim that eliminates static charge. No chance of snagging or injuring materials. New 15" diameter Diamond Fibre cans are now available!

LOWER mill operating COSTS by wider use of C-D-F plastics

Reduce wear and noise, eliminate corrosion, increase machine efficiency, save materials. That's what these four examples of C-D-F plastics can do for your mill. C-D-F is a leading manufacturer of vulcanized fibre, the long-life material that goes into Diamond Fibre Roving Cans which are famous for quality and their seamless uniformity. C-D-F has years of experience in selling the textile industry, has established its southern headquarters in Spartanburg, S. C. Reasonable prices, superior quality, fast service are part of every order placed with the friendly C-D-F textile sales engineer. If lowering mill operating costs is your responsibility, C-D-F . . . a big reliable source of supply . . . helps you with a complete line of textile industry plastics.

C-D-F MAKES

BARRELS
BEARINGS—cloth roll, jig
BOARDS—examining
BOBBINS
BLADES—separator
BOXES—battery filling
bobbin
conditioning
doff
mill
quill
spooler
tote
BUSHINGS—binder
CAMS
CANS—roving waste
COUPLINGS
COVERS
spinning bucket
GEARS—auxiliary
card
coiler head
fitting
motor pinion
quill
picker
spinner
spooler
GUIDES—knife
PICKER—stick parts
PINS—binder
PIRNS
PLATES—lay
PLUGS—parallel
POT—eyes
PULLEYS
RECEPTACLES
ROLLS—lap
ROLLERS
SEPARATORS
SHEETS—bin lining
SHUTTLE PARTS
TABS—binder
TRACK—tenter frame
TRUCKS—cloth
conditioning
doff
filling
quill
spinning
spooler
twisting
waste
winding
TUBES—core sizing
TUBING—spiral
WASHERS

Continental-Diamond Fibre

CONTINENTAL-DIAMOND FIBRE COMPANY
NEWARK 11, DELAWARE

CALL C-D-F SPARTANBURG, Spartanburg 3-6397 for fast service, expert technical help.

STOP THE THREAT OF CORROSION WITH TRUSCON SPEED REX

PROVIDES TOUGH, RESISTANT PAINT FILM FOR METAL, WOOD OR CONCRETE SURFACES!

TEXTILE manufacturers are using "Speed Rex" to lick corrosion problems caused by condensation. "Speed Rex" is the *toughest* all-purpose coating ever formulated for painting machinery, tools, conveyors, benches, guard rails and most other plant equipment.

AND "Speed Rex" resists *hard knocks* as well as moisture and chemicals. You paint less often when you standardize on "Speed Rex" because rough, tough physical abuse bounces off the rugged hide of this protective coating.

THE reason "Speed Rex" can take so much punishment is Devran . . . an Epoxy Resin that gives paint greater wear-ability and resistance to acids, alkalis and moisture.

GET full information on how to solve condensation problems and other painting problems in the textile industry. Send coupon today!

TRUSCON Laboratories
Division of Devoe & Raynolds Co., Inc.

TRUSCON LABORATORIES
Box 69, Milwaukee Junc. P.O., Dept. T
Detroit 11, Michigan

Please send details about Speed Rex

NAME_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

Personal NOTES ABOUT MEN YOU KNOW

Alexander City, Ala., to its presidency for a third term.

Monroe Seligman, vice-president of Champlain Spinners, Inc., Whitehall, N. Y., has resigned.

Alfred Guidotti is now assistant to the president at Clinton (Mich.) Woolen Mfg. Co.

PHI PSI CONFERS HONORARY DEGREES

Recent recipients of honorary degrees from Phi Psi textile fraternity at Clemson (S. C.) College: **Walter Cox,** assistant to the president, Clemson College; **William J. Erwin,** president, Dan River Mills; **W. Jack Greer,** president, Texize Chemicals, Inc.; **A. U. Priester,** vice-president and general manager, HDV Division, Callaway Mills Co.; **W. T. Rainey, Jr.,** associate professor of textile chemistry and dyeing, Clemson College; and **Ellison S. McKissick,** board chairman, Alice Mfg. Co.

Standing, left to right: **H. M. Brown,** dean, School of Textiles, Clemson; **John T. Wigington,** technical director ACMI; Mr. Cox; **Willard A. Colby,** Emery Industries; and **David Gentry,** president of Clemson student chapter, Phi Psi. Seated: Mr. Erwin; Mr. Greer; Mr. Priester; and Mr. Rainey.

Obituaries

Fred M. Allen, Sr., 67, former executive secretary of the Southern Combed Yarn Spinners Association.

Latimore W. Ballou, 82, co-founder of Guerin Mills, Inc., Woonsocket, R. I.

Arthur Clayton, 76, technical director of Peerless Color Co., Plainfield, N. J.

Charles L. Crosby, 61, manager of Richmond, Va., district office, Allis-Chalmers Mfg. Co.

J. T. Dell, 64, secretary-treasurer of Del Mark, Inc., Hickory, N. C.

Raymond Doherty, 70, partner in the Henry Doherty Silk Mill, Clifton, N. J.

Leon Formell, 67, retired general foreman of Rugby Knitting Mills, Buffalo, N. Y.

Morris J. Frank, 68, president of Frank Associates, Inc., Cementon, Pa.

Alexander J. Hay, 87, retired superintendent of Lawton Spinning Co., Woonsocket, R. I.

W. Harry Inett, 71, vice-president and general manager, M. J. Whitall Associates, Inc., Worcester, Mass.

Archibald Lammey, 57, secretary-treasurer, Charlottesville (Va.) Woolen Mills.

Fred G. Lehm, 64, superintendent of West Chester (Pa.) Hosiery Mills, Inc.

John W. Long, 68, retired superintendent of Groves Thread Co., Inc, Gastonia, N. C.

William C. Lovejoy, 77, retired credit manager for Fulton Bag & Cotton Mills, Atlanta, Ga.

Louis R. Margoles, 55, co-owner of Western Woolen Mills, Milwaukee.

Connell R. Miller, 36, executive vice-president, Texas Textile Mills, Dallas, Tex.

William M. Moore, 66, retired superintendent of Musgrove Mills, Gaffney, S. C.

John O'Brien, 74, retired foreman of Hugh Nelson Columbia Carpet Mills, Inc., Philadelphia, Pa.

Walter H. Paige, 77, former superintendent of York Mfg. Co., Saco, Me.

Albert S. Selig, president of the Selig Co., Atlanta, Ga.

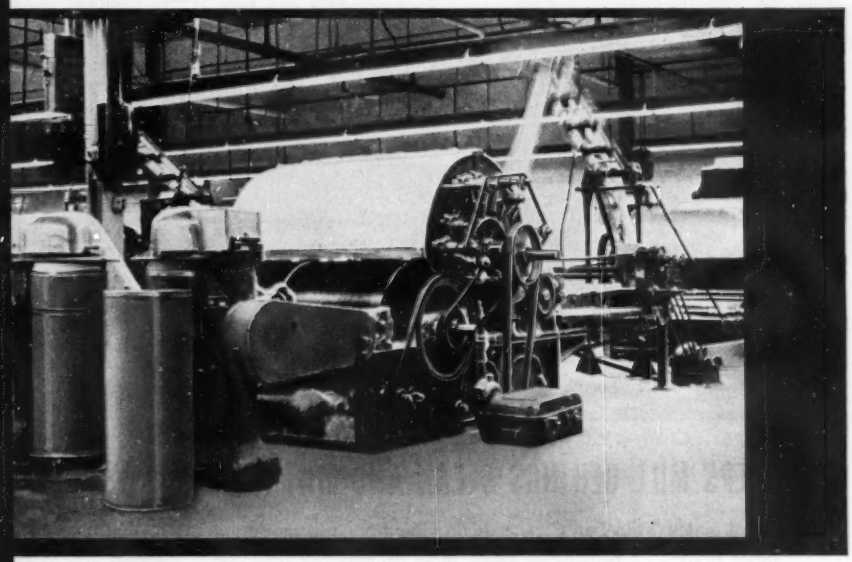
Walter D. Steele, 84, retired president of Benjamin Electric Mfg. Co.

Ben Verity, 83, retired representative of Carbic Color & Chemical Co.

Oscar Weiner, 60, former partner in York Textile Print Co., Brooklyn, N. Y.

CARDING number one of a series depicting

MORE AND BETTER TEXTILE PRODUCTION WITH HYATTS



Proctor & Schwartz Model 670 Breaker Card and Model 671 Finisher equipped with HYATT Roller Bearings at Chatham Mfg. Co., Elkin, N. C.

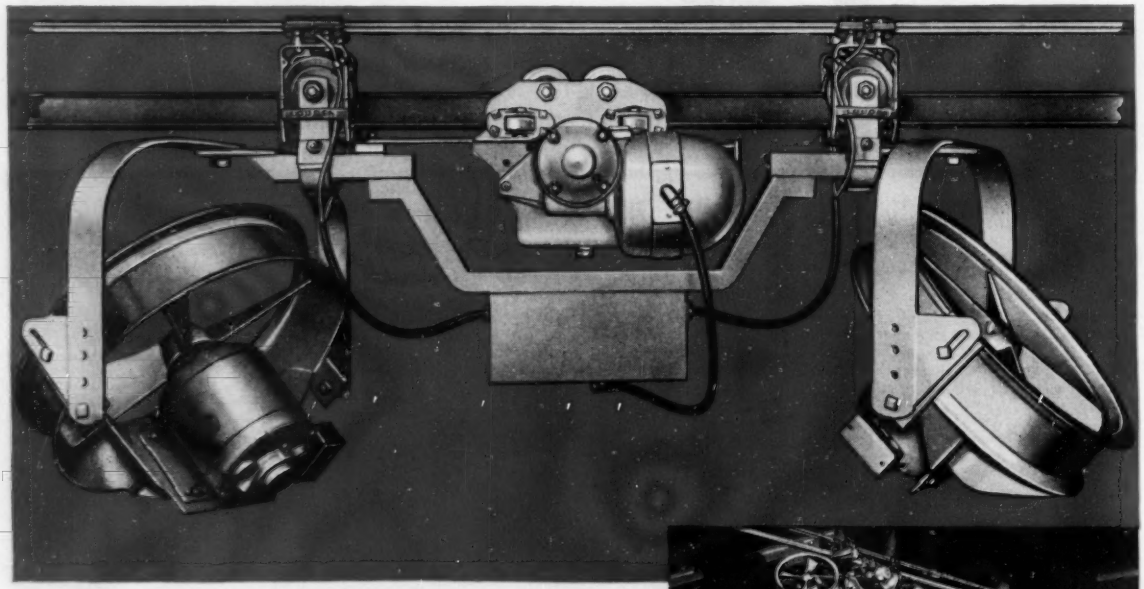
The problem of producing uniform sliver is easily overcome when cylinder, doffer and lickerin settings are accurately maintained. The application of HYATT Roller Bearings—*expertly engineered for each specific duty*—is the most efficient method of maintaining these critical settings. You're always sure of highly uniform carding—smoother rotation of workers and strippers—*more and better textile production with HYATTS*!

For further details on the profitable application of HYATT Roller Bearings to textile machinery, request Bulletin T-54 from Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

HYATT ROLLER BEARINGS

STRAIGHT BARREL TAPER

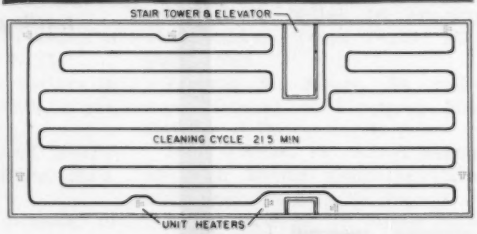
the Louden Automatic TWIN-FAN CEILING CLEANER



KEEPS MILL CEILINGS CLEAN AND LINT-FREE

The Louden Twin-Fan Cleaner is proving a boon to more and more mills . . . because it keeps their ceilings *continuously* clean, *continuously* free of lint. The twin fans sweep both sides of the track simultaneously. Each fan is independently adjustable and can be pointed in any direction, thus meeting the special needs of your room. It cleans without disturbing machine processes going on below. The threat of "gouts" or "slubs" is eliminated, together with the need for manual blowing down, or ladder climbing to adjust stationary fans. There are no dead air pockets; humidity is even throughout. Automatic shut-off and turn-on for passage through areas where blowing is not needed is one of the features available. And you can be sure of highest dependability, efficiency and economy because of Louden's long experience in building Monorail Equipment of every type. Let a Louden engineering representative tell you more, what it will cost, what you will save. Your inquiry will receive prompt attention.

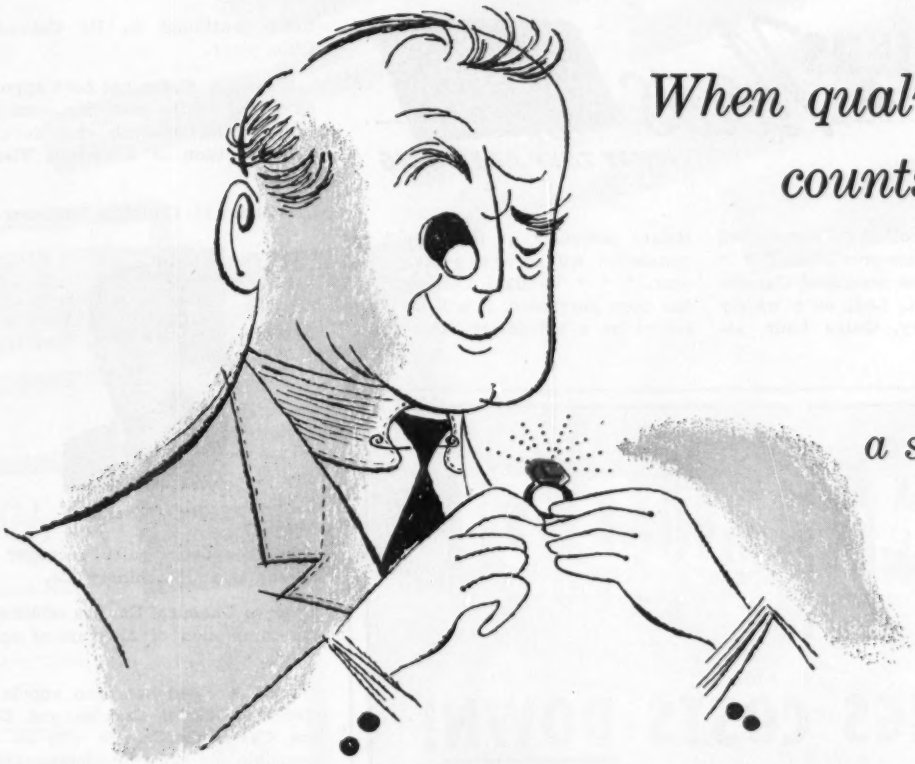
In the installation pictured and diagrammed above, a Louden Automatic Twin-Fan Cleaner travels continuously over a Louden Track 2,800 feet long. It makes the complete round trip every 22 minutes, blanketing the entire spinning room in a well known southern mill.



THE LOUDEN MACHINERY COMPANY
5202 Court St., Fairfield, Iowa
A Subsidiary of Mechanical Handling Systems, Inc.

Louden
MONORAIL & CRANES

Since 1867—the first name in materials handling



When quality counts . . .

it pays to go to a specialist

WHEN QUALITY DYE PERFORMANCE COUNTS, IT PAYS TO GO TO

ALTHOUSE

Leading Specialists in Dyes for Cotton — Rayon — Nylon and Other Synthetics and **blends**
For 40 years Althouse research has pioneered in raising textile industry standards of

COLORFASTNESS

This record of leadership assures highest quality performance when you specify these famous, exclusive Althouse dye specialties:

Superlitefasts	Nylanthrenes
Azoanthrenes	Nydyes
Supernylites	Sol-Aqua-Fast

ALTHOUSE
First name in Dyes for Colorfastness
ALTHOUSE CHEMICAL COMPANY, INC., READING, PA.
Subsidiary of Crompton & Knowles Loom Works

SUPPLIERS News

WHAT THEY ARE DOING

American MonoRail Co. has elected C. L. Fell a vice-president. * * * The company has organized Canadian MonoRail Co., Ltd., as a wholly owned subsidiary. Quigg Lohr, assistant secretary of the parent organization, will serve as general manager. * * * Landahl Conveyor Co. has been purchased; it will be maintained as a subsidiary with operations continued in its Columbus, Ohio, plant.

Wayne A. Sisson has been appointed leader of the new tire yarn section in the research and development division of **American Viscose Corp.**

William M. Gallahue has been ap-

Mr. Gallahue

pointed general sales manager of **Mount Hope Machinery Co.**

Royce Chemical Co. has celebrated the completion of 25 years of operation.

John A. Field has been appointed vice-president of **Carbide and Carbon Chemicals Co.** He will be responsible for sales development and related activities, including the company's fellowships at Mellon Institute.

John W. Brooks has been named merchandising manager of the tex-

Mr. Brooks

tile division, **Celanese Corp. of America.**

Cleveland Crane & Engineering Co. is erecting a plant in Los Angeles to house office, warehouse, and manufacturing facilities. * * * Roy Dehn has been appointed director of engineering for the company.

Richard E. Allard, an officer in the cotton division of **Commercial Factors Corp.,** has been appointed to the National Panel of Arbitrators of the American Arbitration Association.

W. W. Adcock has been appointed manager of the Fort Smith, Ark.,

(Continued on page 213)

NON-FLUID OIL

TRADE MARK REGISTERED

BRINGS COSTS DOWN!

NON-FLUID OIL stays where applied—on roll necks of spinning frames. Dripping liquid oils rot roll covers and spatter goods. Therefore, you pay heavily for what you don't use.

NON-FLUID OIL stops this loss—saves oil and application costs — cuts down "seconds" — provides clean, dependable lubrication.

See NON-FLUID OIL on-the-job. Learn why 7 out of 10 mill men prefer it. Send coupon for a free working sample.

NEW YORK & NEW JERSEY LUBRICANT COMPANY
292 MADISON AVENUE, NEW YORK 17, NEW YORK

Works: Newark, N. J.—Warehouses and representatives in principal industrial centers

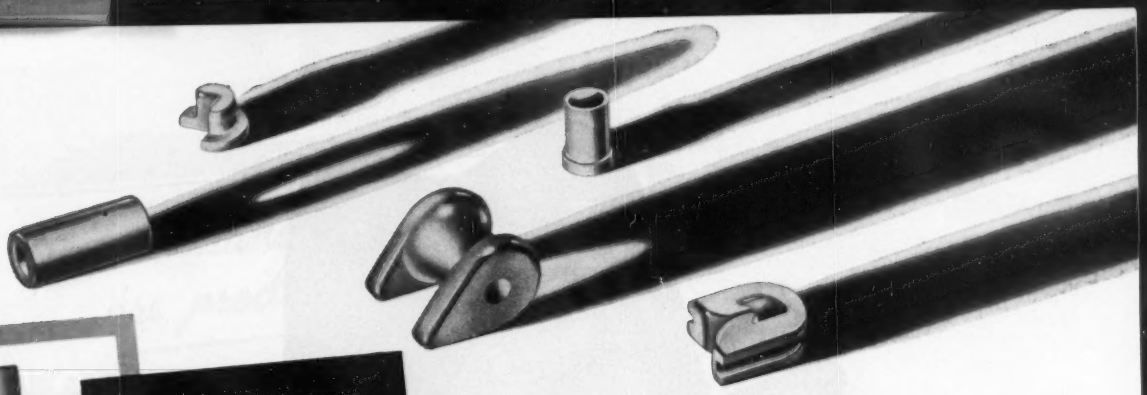
Please send me, without obligation, a free testing sample of NON-FLUID OIL.

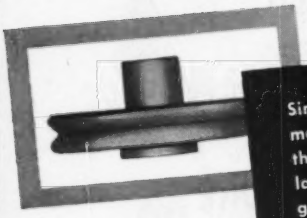
NAME_____ TITLE_____

FIRM_____

ADDRESS_____

TYPE OF MACHINERY_____





Since the first announcement of these guides more than two years ago, popular demand has been so great that this advertisement is repeated with the addition of three new AlSiMag guides. These guides are thoroughly proved by constant use in several hundred mills.

AlSiMag® GUIDES for WHITIN-SCHWEITER QUILL WINDERS

These AlSiMag Guides have been thoroughly proved in the winding of synthetic yarns at terrific speeds.

ADVANTAGES:

LONGER LIFE—Many mills report that these AlSiMag guides give 10 to 15 times the wear obtained from their best former guides.

LIGHTER TENSIONS—AlSiMag guides can be supplied in satin or highly polished finish.

MORE UNIFORM TENSIONS—AlSiMag guides are homogeneous and are uniform physically and dimensionally.

LESS GUIDE BREAKAGE—All AlSiMag materials are considerably stronger than ordinary ceramic guide materials. AlSiMag 513 has almost double their mechanical strength.

BETTER QUALITY YARN—Hard, homogeneous AlSiMag has no surface skin to wear through, cause undetected yarn damage. Guide wear is very gradual, simply exposes new surfaces of the same character as the original.

AlSiMag No. GE-20256

AlSiMag No. GS-24909-A

AlSiMag No. GE-28390

AlSiMag No. GU-10713-B

AlSiMag No. GE-16861

AlSiMag No. GS-24244

AlSiMag No. GE-15978

These AlSiMag Guides are available in either satin finish or highly polished finish in any of these AlSiMag materials.

ALSIMAG 192—(Considered standard). A non-conductor of electricity. Hardness of 8 on Mohs' scale. Gives exceptionally long life on most requirements. Ivory color.

ALSIMAG 193—A conductor of electricity, used for dissipating static charges. Metallic gray color. Otherwise it is identical to AlSiMag 192.

ALSIMAG 513—Super hard (9 on Mohs' scale), resistant to cracking, chipping, great mechanical strength. Its cost is justified where excessive wear is experienced or where satin finish must be maintained under severe conditions. Pink color.

TEST SAMPLES ON REQUEST

Try these AlSiMag Guides on your Whitin-Schweiter Quill Winders. You'll find that they are the best and by far the most economical.

53RD YEAR OF CERAMIC LEADERSHIP

AMERICAN LAVA CORPORATION

A Subsidiary of Minnesota Mining and Manufacturing Company

CHATTANOOGA 5, TENNESSEE

SALES ENGINEERS: NORTH AND EAST: Jay S. Gosnell, 671 Broad St., Newark, N. J., Mitchell 2-8139. SOUTHEAST: Joe E. Spearman, American Lava Corporation, Chattanooga 5, Tenn., 5-3411. ALL OTHER AREAS: J. B. Shacklett, American Lava Corporation, Chattanooga 5, Tennessee, 5-3411. CANADIAN REPRESENTATIVE: Ian M. Haldane and Company, Post Office Box 54, London, Ontario, Canada. CONTINENTAL EUROPEAN REPRESENTATIVE: P. C. Huguenin Luzern, Gerbergasse 6, Luzern, Switzerland

What's your excuse for shiners?

Simply by installing Kidde Compensators, more than 500 leading textile mills have put an end to shiners, loose ends and a host of other tension problems. You can do the same.

For moderate yarn speeds and tensions, get Kidde *Standard* Compensators – adjustable from 10 to 120 grams or 100 to 300 grams. They insure constant output tension, help you produce a *quality* product at less cost.

If you run delicate yarns at high speeds, get Kidde *Double Disc* Compensators. They maintain constant tension at the quill, improve quality and efficiency at the loom. Result – less costly down time, fewer rejects.

Don't give *your* products a black eye. Let Kidde Compensators help solve *all* your tension problems. For more information, write Kidde today.

Kidde Double Disc Compensator: 10 to 140 grams or 100 to 300 grams.

Kidde

The word 'Kidde' and the Kidde seal are trademarks of Walter Kidde & Company, Inc.

Walter Kidde & Company, Inc., 290 Main Street, Belleville 9, N. J.

To merchandisers who are production-minded

all smart eyes are on . . .

THE WILDMAN CYLINDER NEEDLE Revolving Fabric Machine

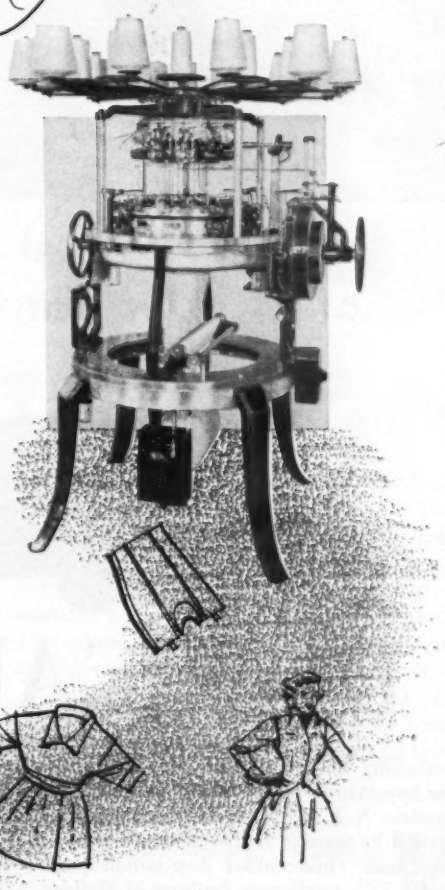
If it's "ayes" you want to help you determine the best production unit for your long-range plans, consider this machine, used by producers to process millions of units for the modern markets.

Technically, for your production planning, the inherent features of this machine may be of interest:

SEVERAL MECHANISMS APPLICABLE ACCORDING TO MACHINE DESIGN

• Micrometer Stitch Cam Adjustments with Overthrow Guards • Patterns by Wheels, Pressers and Needles • Fabric and Course Counter • Fabric Winding Mechanism • Individual or Belt Drive • Aluminum Gear Guards • Furnishing Wheel Yarn Control, Stop Motion and Continuous Running Bobbin Stand

Check specifications for your needs.
Inquire today for complete information.



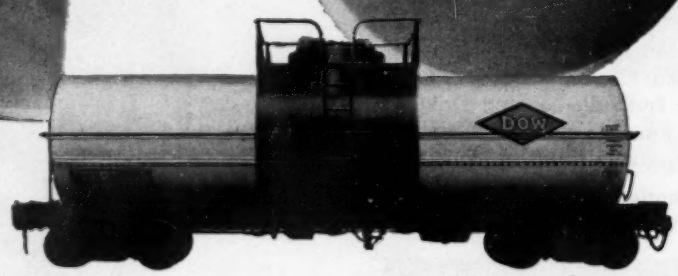
WILDMAN

MFG. COMPANY, NORRISTOWN, PA.

MANUFACTURERS OF: FULL FASHIONED HOSIERY MACHINES; CIRCULAR MACHINES FOR OUTERWEAR, UNDERWEAR, SPORTSWEAR, TRIMMINGS; STOP MOTIONS

DOW

73%



DOW CAUSTIC SODA

Availability of 73% caustic soda solution from Dow is now importantly increased. Two new bulk terminals—at Bayonne, N. J. and North Charleston, S. C.—are speedily serviced by the new liquid chemicals tanker *S. S. Marine Dow-Chem*. These added distribution points, plus expanded 73% production facilities at Midland, Mich. and Freeport, Texas, mean *faster*, more *economical* delivery to the growing number of 73% caustic users.

Our Alkali Sales Department will gladly assist you in accurately figuring your potential *savings* with 73% caustic. THE DOW CHEMICAL COMPANY, Dept. AL 362F, Midland, Michigan.

you can depend on DOW CHEMICALS

DOW

fewer ends down

power savings up—

since this leading southern mill* switched to

GULFSPIN

Mill personnel report these important benefits since switching to Gulfspin, the revolutionary spindle oil: (1) Deposits on bolsters and bases disappeared in a short time; (2) a big reduction in ends down; (3) upper spindle lubrication, formerly a constant worry, is now excellent; (4) spindles operate cooler and stay cleaner.

Periodic analyses prove that Gulfspin has not increased in viscosity, even though the spindle bases were last drained in 1947. Result: A substantial power saving.

Gulfspin works three ways to keep spindles clean and insure smoother spindle operation: First, it is oxidation stabilized to resist sludge formation. Second, it prevents contaminants from depositing on spindle parts, a major cause of spindle vibration. Third, it provides effective protection against rust—reduces bolster wear.

Contact a Gulf Sales Engineer at your nearest Gulf office today and give him a chance to prove these advantages of Gulfspin in your mill.

Gulf Oil Corporation • Gulf Refining Company • 1822 Gulf Building, Pittsburgh 30, Pa.

GULF

* name upon request

'Round the World 1113 times for $1.00

Calculations based on performance records of Victor 4/0 F1.1 X3D Travelers show that one dollar's worth ran about 27,840,000 miles — 1113 times the distance around the equator.

When you see performance like that, it's easy to think that traveler costs are too small to be worth bothering about. But such records are achieved only when you choose the right traveler for the job, and get the best that money can buy.

Selecting travelers carelessly, without proper regard for quality, will quickly cut down the "mileage". Also, excessive ends down, plus frequent traveler changes, can boost your traveler-pound cost in yarn production far out of line.

When you choose Victor Travelers, a Victor Service Engineer will help you make sure to get the traveler best suited to your individual spinning or twisting. You also get extra long traveler-life, because Victor Travelers take top honors in any test for quality and uniformity.

Remember, traveler costs per pound of yarn depend, *never* on price, *always* on performance. Plan now to talk to a Victor man, whether you are running conventional fibers, synthetics, or blends. Write, wire or phone the nearest Victor office . . . for prompt service.

•

VICTOR Ring Travelers

VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I. ..... 20 Mathewson St. ..... Tel. Dexter 1-0737

GASTONIA, N. C. ..... 914-916 East Franklin Ave. ..... Tel. 5-0891

HEAVIER and HUSKIER the Southern

DURAWELD SHUTTLE

. . . has been used successfully for years by leading mills everywhere and is no longer considered experimental.

Its added and consistent weight provides a shuttle 10% heavier than the usual dogwood or fibre covered shuttle, thus reducing "Throwing out" and the consequent breakage due to this action.

Duraweld . . . is Southern's trade name for shuttles made with dogwood centers having one or two sides of *Stehide* or *Compreg*. The two materials become an inseparable unit through an unusual action of molecular adhesion.

Stehide . . . is Southern's trade name for high density phenolic impregnated cloth laminate.

Compreg . . . is Southern's trade name for high density impregnated wood laminate. The Duraweld construction is applicable to all types of shuttles and provides—

Greatly strengthened side walls . . . Elimination of wood defects . . . Will not heat up . . . Use of less loom power due to greater weight . . . Resists splitting . . . Moisture proof in side walls. All of these plus many more advantages make the cost of Duraweld less over a period of time.

Consult your nearest Southern Shuttle Field Engineer for the information you require.

SOUTHERN SHUTTLES

A DIVISION OF **STEEL HEDDLE MFG. CO.**

PARIS, GREENVILLE, S. C.

It's Southern for Service and Delivery

TEMPERED
TRADE MARK REG.

2-0-2

Which one is Smiling?

The one with "happy feet"—the one wearing LANOLIZED stockings!

Women recognize the great plus-values in LANOLIZED hosiery: stockings of incomparable beauty that combine the ultimate in comfort . . . stockings so silky-soft, so velvety-smooth . . . stockings that *glide* on to sculpture every inch of the leg!

Nylons—as superbly comfortable as they are strikingly beautiful . . . Nylons LANOLIZED!

**Trade Mark Copr. 1954 by Lanolized, Inc., 350 Fifth Ave., New York City—Originators.*

The following mills are accredited "Lanolized" Licensees:

Adams-Mills Corporation . . . C. W. Anderson Hosiery Co., Inc. . . . Asheboro Hosiery Mills, Inc . . . Berkshire Knitting Mills . . . Brownhill & Kramer Hosiery, Inc. . . . Charles H. Bacon Company . . . Chadbourn Hosiery Mills, Inc. . . . Danita Hosiery Manufacturing Co., Inc. . . . Durham Hosiery Mills Evenknit Hosiery Mills . . . Fieldcrest Mills, Inc. . . . Francis-Louise Full Fashion Mills, Inc. . . . Grey Hosiery Mills, Inc. . . . Hugh Grey Hosiery Company Kenosha Full Fashioned Mills, Inc. . . . Lambert Hosiery Mills, Inc. . . . Magnet Mills, Inc. . . . Marmode Hosiery Mills . . . McCrary Hosiery Mills, Inc. Morganton Full Fashioned Hosiery Co. . . . Oscar Nebel Hosiery Corporation . . . Ridgeview Hosiery Mill Company . . . Robinson Mills, Inc. . . . Rosedale Knitting Company . . . Sheffield Hosiery Mills, Inc.
In Canada; Chatelaine Hosiery, Ltd.

SCHOLLER BROS., INC. Authorized Manufacturers and Distributors of LANOLIZED* . . . The Miracle Finish. Collins & Westmoreland Sts., Philadelphia 34, Pa. IN CANADA: Scholler Bros., Ltd., St. Catharines, Ontario

PIONEERS IN TEXTILE FINISHES SINCE 1907

SKY HOOK NEEDED?

Rescue a half-drowned boy from a swollen river? Make a quick survey of terrain a goat couldn't negotiate? These and many more chores are easy for the amazingly versatile helicopter.

In a less dramatic way another new machine is making news—and profits—as a replacement of older equipment. VanVlaanderen's versatile DYE-MASTER JIG is the first American machine designed for ALL FABRICS — cotton, silk, synthetics and blends. It gives high production and top quality for **all** constructions from sheers to cotton ducts.

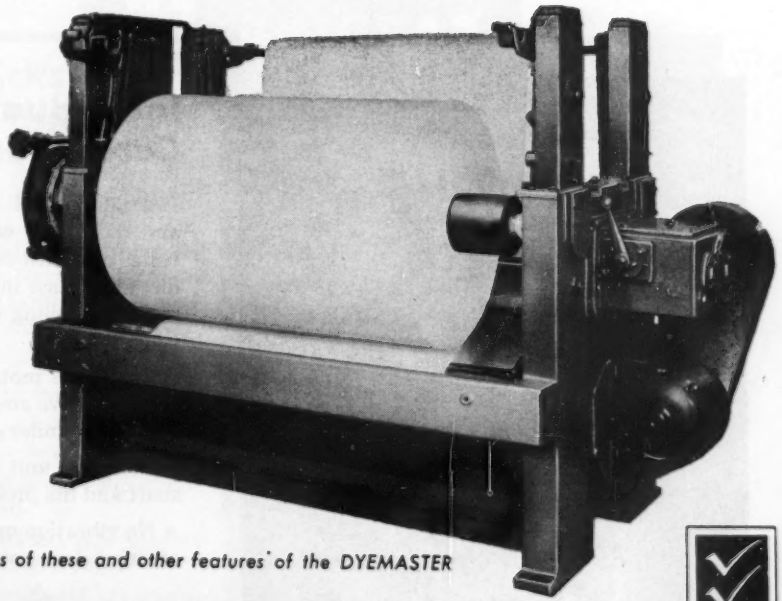
The DYEMASTER'S versatility is made possible through Van Vlaanderen's know-how in jig design and manufacture, which give this machine:

CONSTANT CLOTH TENSION which can be pre-set for practically no tension or for any tension up to maximum.

CONSTANT CLOTH SPEED. The DYEMASTER achieves near-constant cloth speed through a special differential transmission — greatly contributing to even dyeing.

AUTOMATIC CONTROL which can be pre-set to control reversing and stopping.

Power Loading and Unloading is an exclusive feature of Van Vlaanderen jigs.



Write for folder giving full descriptions of these and other features of the DYEMASTER

VAN VLAANDEREN MACHINE COMPANY

370 Straight Street, • Paterson 3, New Jersey

In the South — Parrott and Ballentine • 610 South Carolina National Bank Building • Greenville, South Carolina

WORLD'S LARGEST MANUFACTURER OF MACHINES FOR PROCESSING MODERN FABRICS

ALLIS-CHALMERS

TEXTILE DRIVES

All

Increase Quality and Production ... Cut Maintenance

Power Packages . . . Get complete coordinated equipment from power line to the driven shaft of your textile machinery. Allis-Chalmers textile drives result from thorough knowledge of power requirements throughout the plant. Each unit described here has been designed to get maximum efficiency, output and continuity of service from a specific type of machine. Motor, control and drive characteristics are all tailored to the job, and long operating experience has proved their effectiveness.

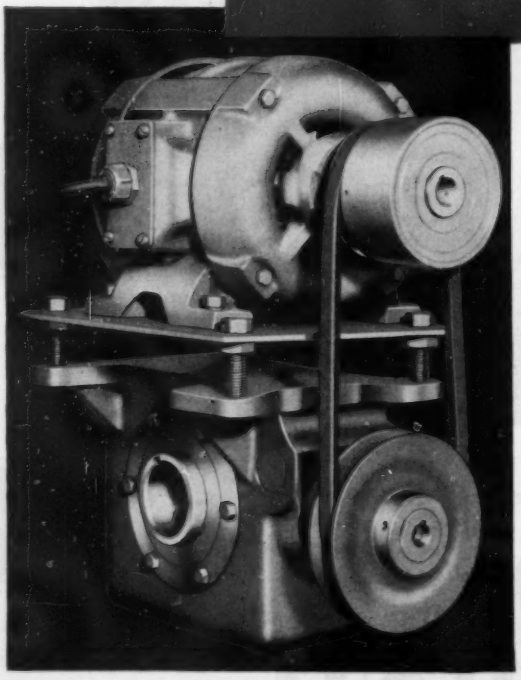
Backed by Certified Service

Allis-Chalmers distributors and district offices in all major textile areas offer skilled application help. Well-equipped and conveniently located Certified Service Shops provide factory-approved methods and parts to keep your drive equipment operating at top efficiency.

Get This Literature

Handy Guide to Motor Selection (Bulletin 51B6052) —*Quick-Clean* Textile Motors (51B6055B) —Across-the-Line Starters (14B7132) —Reduced Voltage Starters (14B7215) — and *Vari-Pitch* Drive Engineering Data (20B7499). Call your nearby A-C District Office or write Allis-Chalmers, Milwaukee 1, Wis.

CARDING



Individual Card Drives Make Card Rooms Cleaner, Safer

Individual card drives do away with unsightly and dangerous overhead line shafting and long belts. No hard-to-clean ceiling structure to drop dirt and grease in machines — better lighting and plenty of ceiling room to install air conditioning.

Features

Quick-Clean motor drives gear reducer through *Texrope* drive and mercury clutch. Sheave adjustable for cylinder speeds from 157 to 189 rpm.

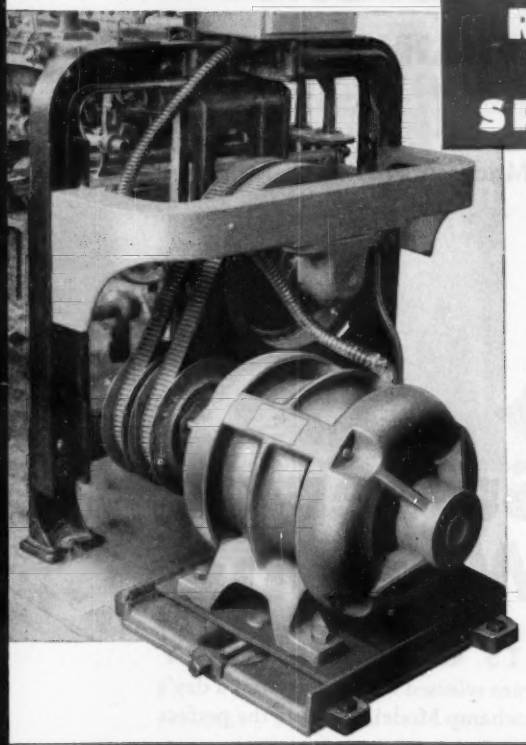
- Complete unit mounts on present card cylinder shaft and fits present aisle space.
- No vibration or strain on card arch, and weight of drive does not overload bearing.

Quick-Clean, Vari-Pitch and Texrope are Allis-Chalmers trademarks.

A-C ALLIS-CHALMERS

ALLIS-

through the mill



ROVING and SPINNING

Lint and Dirt Can't Stop *Quick-Clean* Textile Motors

Wide open air passages and powerful fans sweep dirt and lint right through and OUT of these motors. They end motor problems created by lint-laden atmospheres.

Features

Bearings: sealed, prelubricated double-width single-row ball bearings operate long periods without attention of any kind. May be cleaned and repacked if required.

- Slow-acceleration motor for roving frames. Takes almost three times as long as standard motor to reach speed. No special control required.
- *Texrope* V-belt drives and correct control supplied to meet complete machine drive needs.

WEAVING

New Motor Design Licks Problems of Modern High Speed Operation

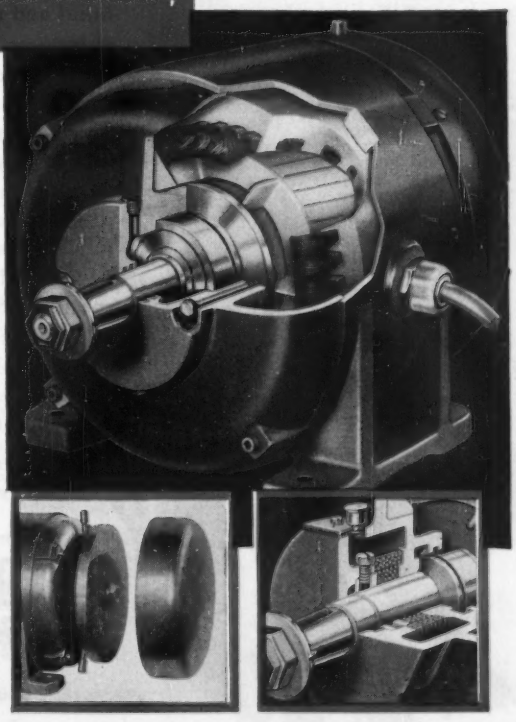
Oversize rotor, stator and bearings built to handle rapidly oscillating load of loom speeds as high as 200 picks per minute and more. Rotor diameter is as great as possible for added flywheel effect, and slip has been regulated to produce minimum speed variation. Nearly two years of field testing prove the operating economies possible.

Features

Totally enclosed, non-ventilated design excludes all lint from interior.

- Stator double insulated, extra large, heavy construction.
- Die cast rotor of large diameter and proper slip maintains stable speed under pulsating load.
- Oversize ball bearings of double-shielded type protect against over-greasing that causes bearing trouble.
- Optional: (1) flywheel for added inertia and (2) waste-packed bronze sleeve bearing.

A-4538



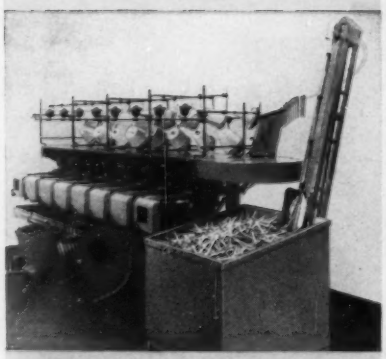
CHALMERS

FOSTER-MUSCHAMP

MODEL 66 AUTOMATIC FILLING WINDER

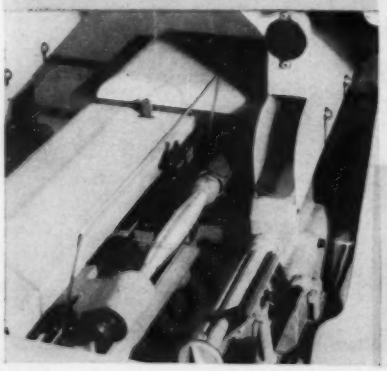
Made in Westfield, Mass., U.S.A.

Superior Winding



Complete machine with automatic pin-boarder and centralized bobbin hopper.

Feelerless build and empty bobbin ready to move into winding position.



ONE OF 8 POINTS OF SUPERIORITY

The bobbins illustrated were selected at random from a day's production of the Foster-Muschamp Model 66. Note the perfect build and the uniformity.

It doesn't matter how fast a filling winder produces or how low its operating cost or investment is; if it doesn't preserve the original quality of the yarn and produce bobbins that deliver properly in the shuttle, its advantages are nullified.

The Foster-Muschamp Model 66 Automatic Filling Winder *does* produce practically perfect bobbins and *does* preserve the original quality of the yarn, because of close delivery thread guide, shock-proof start, simple and effective layer locking device and feelerless build — all with an unequalled spindle speed — 15,000 r.p.m.

Superior winding is only one of many points of superiority of the Foster-Muschamp Model 66. In fact this machine has ALL EIGHT features that are regularly demanded by mills purchasing automatic equipment.

If you would like to know more about these 8 features, write for "Foster Facts — Volume 4 — Number 5".

FOSTER MACHINE COMPANY

A Winder for Every Textile Purpose

WESTFIELD, MASSACHUSETTS, U.S.A.

Southern office, Johnston Bldg., Charlotte, N. C.

Easy application of fast colors with Du Pont *Capracyl** dyes for wool

The essentially neutral dyeing, metalized Du Pont "CAPRACYL" colors are applied to wool in a short dyeing cycle. They require little or no chemical aids for exhaustion. This means you benefit from savings in time, chemicals, and labor. And the natural strength, beauty, and resiliency of the wool fibers are protected.

Du Pont "CAPRACYL" dyes offer a combination of good wet fastness and excellent light fastness. You'll find them ideal for worsted men's wear, sportswear, auto upholstery, and carpets, and many other fabrics where exposure to light is an important factor.

Even on "tippy" wool, the "CAPRACYL" dyes cover and penetrate well . . . produce level dyeings with proper application methods.

Du Pont has prepared a booklet, "THE 'CAPRACYL' DYES," with technical information on the properties and dyeing characteristics of these new dyes. For your copy . . . or for help on *any* dyeing problem . . . write E. I. du Pont de Nemours & Co. (Inc.), Dyes and Chemicals Division, Wilmington 98, Del.

*REG. U. S. PAT. OFF.

DU PONT *Du Pont Dyes*

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

SONOCO CONES

Precision Paper Products

Standard of the world wherever textiles are made . . . for more than 50 progressive years — the right cone to fit the yarn! And to aid in quick yarn identification, SONOCO can supply cones in plain or colored stock, lacquer tipped, treated or impregnated, colored base and tip, or printed inside or outside. Cones may also be ordered with notches, scores, perforations, in many engineered tip designs—plain, embossed or with Unitex or Velvet surface. Further information may be obtained by discussing your requirements with one of Sonoco's experienced sales engineers or by writing direct.

SONOCO PRODUCTS COMPANY

MAIN OFFICE—HARTSVILLE, S. C.

MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT. LOWELL, MASS.
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DEPENDABLE SOURCE OF SUPPLY

sonoco
SERVES THE WORLD
PAPER CARRIERS
REG. U.S. PAT. OFF.

KEEP IT HOT

you save money at higher temperature with

RAPIDASE®

Continuous high temperature de-sizing has been adopted by virtually every large dyer and finisher in the country. The majority of these use RAPIDASE. One reason is that of all enzyme de-sizing preparations, RAPIDASE is most heat resistant and consequently most suitable for the speedier and more economical de-sizing at higher temperature.

WALLERSTEIN COMPANY, INC., 180 MADISON AVENUE, NEW YORK 16, N. Y.

where **High Quality** is required
the **STROBOTAC** is a **MUST**

You can profit from the experience of thousands of leading textile mills by using G-R Stroboscopes. Improving the quality of output, reducing the cost of production, and having fewer "seconds" are some of the important money-saving benefits obtained daily with the STROBOTAC.

Universally adapted to cotton, woolen and synthetic mill operation, a few of its many applications include:

In the spinning room: keeping spindles at correct speed; checking slack or dirty bands or tapes, spindles that need oiling, crooked idlers; chokes in idlers, under spindles, on bolster, on spindle clutch, in bobbins; spindles out of plumb or crooked or worn; crooked bobbins or bobbins that fit spindles inaccurately

Ring Travellers: checking for misalignment and worn travellers, and observing traveller action

Training Operators: observing in s-l-o-w motion the exact operation of all types of machines to train operators to adjust for best results, and to shoot trouble with a minimum of lost time

For Complete Information *write for the* **STROBOSCOPE BULLETIN**

Type 631-BL
STROBOTAC: $150

Direct-Reading Calibration: 600 to 14,400 rpm

"Stop" or s-l-o-w motion Range: 60 to 100,000 rpm

Operates from any 115-volt 60-cycle line

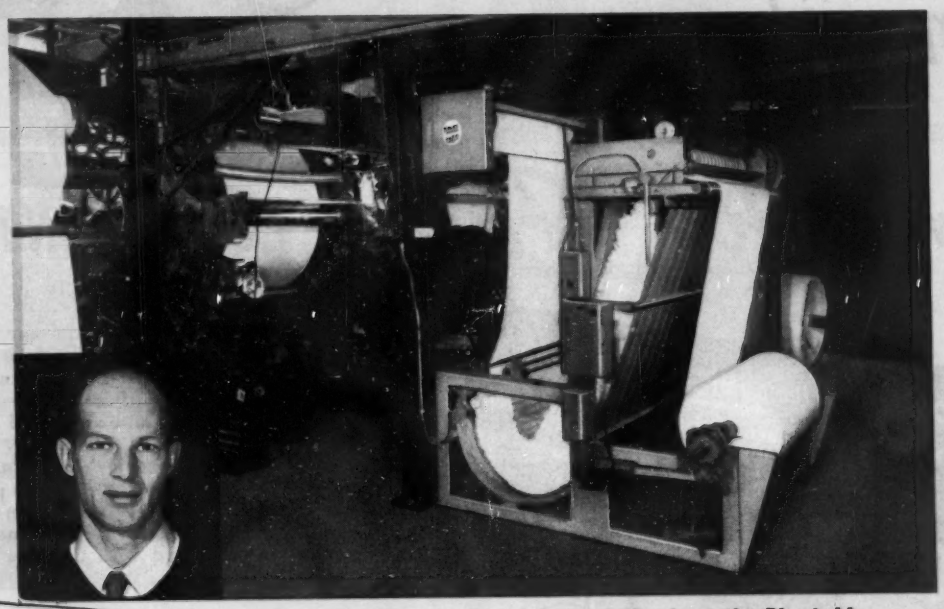
Can be used successfully by anyone

We Sell DIRECT
Prices Shown are NET, fob Cambridge, Mass.

STROBOTAC®
Manufactured Exclusively by . . .
GENERAL RADIO Company 275 Massachusetts Avenue, Cambridge 39, Mass.

Mount Hope SYSTEM

The GREENWICH PRINTING & DYEING CO., INC. reflects savings due to Mount Hope System throughout entire plant!



Mr. Frank Duckworth, Plant Manager, shown above with Mount Hope Continuous Roll Feed Installation, says: "We are installing this money-saving equipment on all our machines!"

GREENWICH PRINTING & DYEING CO., INC.

DECEMBER 30, 1954

MR. DOUGLAS ROBERTSON, PRESIDENT
MOUNT HOPE MACHINERY COMPANY
15 FIFTH STREET
TAUNTON, MASSACHUSETTS

DEAR MR. ROBERTSON:

YOU'LL BE PLEASED TO LEARN THAT THE INITIAL MOUNT HOPE CONTINUOUS ROLL FEED SYSTEM WE RECENTLY INSTALLED IN OUR PLANT HAS PROVEN SO SUCCESSFUL THAT WE ARE INSTALLING THIS MONEY-SAVING EQUIPMENT ON ALL OUR MACHINES.

EVEN MORE IMPORTANT THAN THE INCREASED PRODUCTIONS, CONSISTENTLY HIGH QUALITY AND MARKED REDUCTION IN SECONDS, MADE POSSIBLE BY THESE MOUNT HOPE UNITS, IS THE VERSATILITY THEY GIVE US.

OUR ENTIRE PLANT REFLECTS THIS REDUCED COST OF OPERATION THROUGH SAVINGS IN TIME, LABOR, AND OVERALL EFFICIENCY.

SINCERELY YOURS,

GREENWICH PRINTING & DYEING CO., INC.

Frank Duckworth

FRANK DUCKWORTH, PLANT ENGINEER

FD/11

Get the facts now. Start savings in your plant promptly with the Mount Hope Cloth Handling System. Have us survey your plant — at no obligation.

MOUNT HOPE MACHINERY COMPANY

15 FIFTH STREET, TAUNTON, MASS.

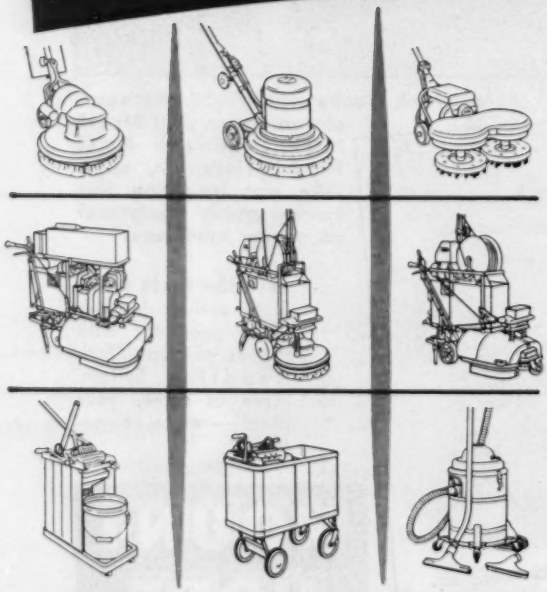
— Originator of Modern Expanders —
Leader in Cloth Handling Equipment

Keep your floor-maintenance men happy . . .

with *Job-Fitted* EQUIPMENT!

Choose from the COMPLETE *Finnell* Line

More than a score of models and sizes permits selection of the equipment that's exactly right for your job!



However much a maintenance man may want to do a good job, and at the same time show savings in labor costs, he's *stymied* if the machine is too small, or too large, or is otherwise unsuited to the job. Different floors and areas call for different care and equipment. That's why *Finnell makes more than a score of floor-maintenance machines.* From this complete line, it is possible to choose equipment that is correct in size as well as model . . . that provides the maximum brush coverage consistent with the area and arrangement of the floors.

Finnell makes *Conventional Polishing-Scrubbing Machines* in both concentrated and divided-weight types, each in a full range of sizes . . . a *Dry-Scrubber*, with self-sharpening brushes, for cleaning grease-caked floors . . . *Combination Scrubber-Vac Machines* for small, vast, and intermediate operations, including gasoline as well as electric models . . . *Mop Trucks* . . . *Vacuum Cleaners* for wet and dry pick-up, including a model with By-Pass Motor. In addition, *Finnell* makes a full line of fast-acting *Cleansers* for machine-scrubbing . . . *Sealers* and *Waxes* of every requisite type . . . *Steel-Wool Pads*, and other accessories — *everything for floor care!*

In keeping with the *Finnell* policy of rendering an individualized service, *Finnell maintains a nation-wide staff of floor specialists and engineers. There's a Finnell man near you* to help solve your particular floor-maintenance problems . . . to train your operators in the proper use of *Finnell Job-Fitted Equipment and Supplies* . . . and to make periodic check-ups. For consultation, demonstration, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 1302 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.

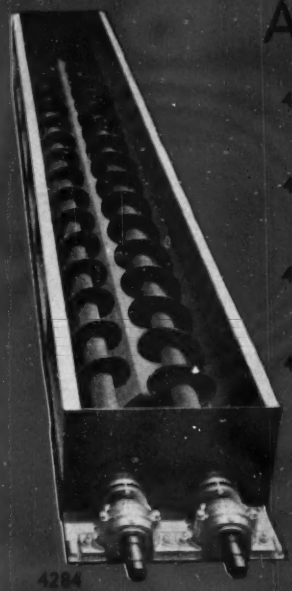
Originators of Power Scrubbing and Polishing Machines

Everything FINNELL for Floor Care

BRANCHES IN ALL PRINCIPAL CITIES

Continental SCREW CONVEYORS

ALL SIZES—ALL TYPES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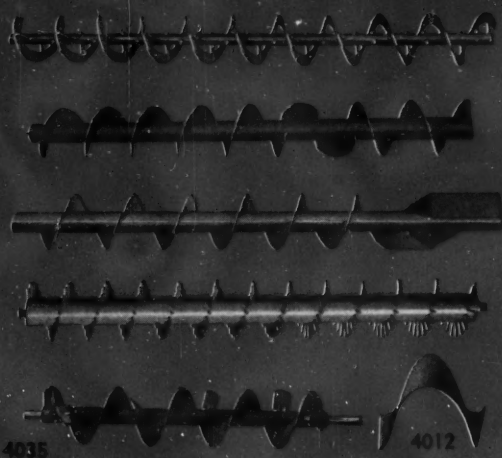
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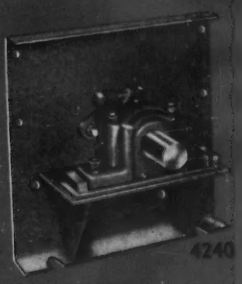
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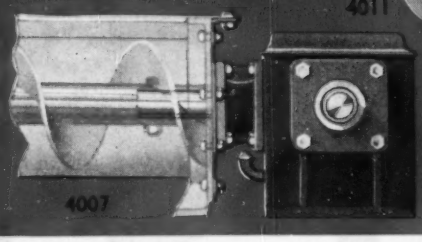
Welded Steel Box End with Pillow Block and Dust Seal

4236

Ball Bearing Hanger

4005

Couplings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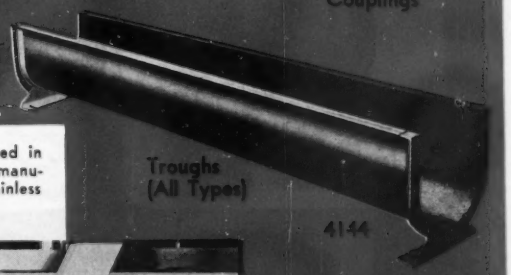
Enclosed Countershaft Box Ends—Babbitted or Ball Bearing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Continental Screw Conveyors and Accessories are manufactured and stocked in all standard sizes for prompt shipment. Continental is also equipped to manufacture special Conveyors for special purposes, such as Rubber Covered, Stainless Steel, Archimedean and Agricultural types. Write for Catalog CC-541.

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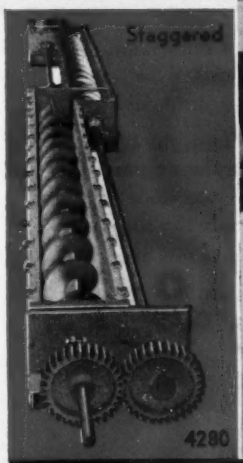
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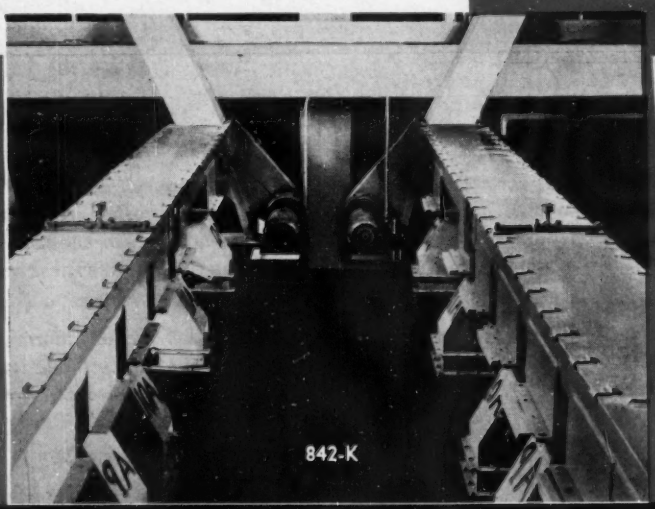
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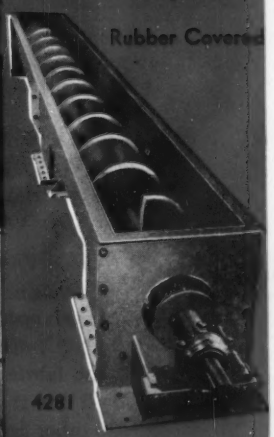
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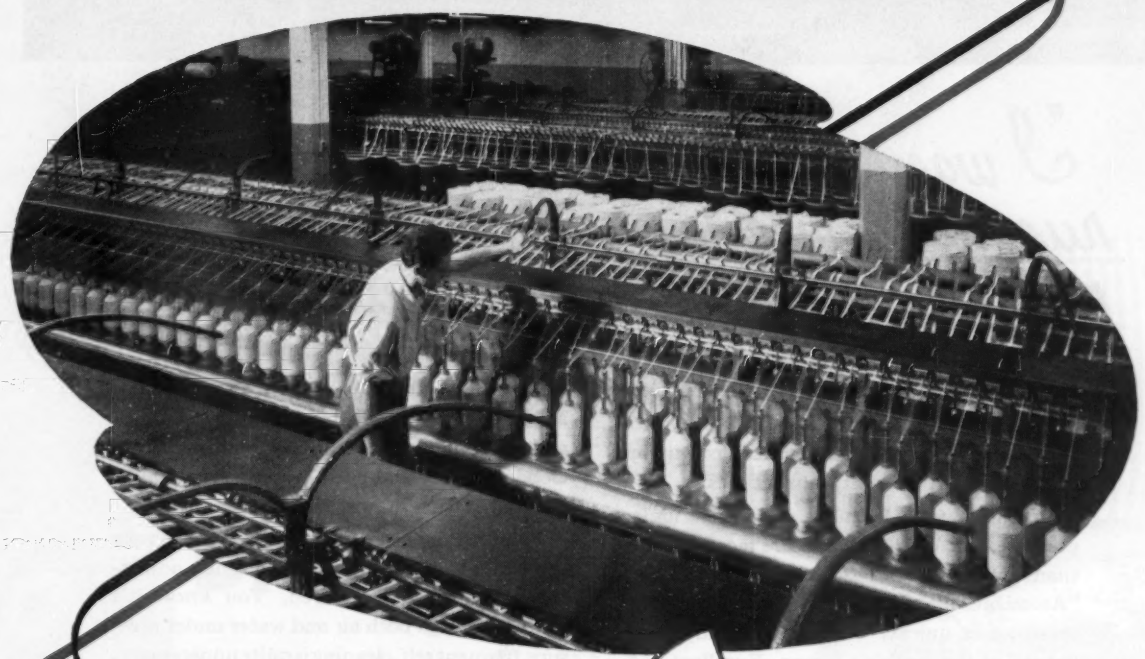

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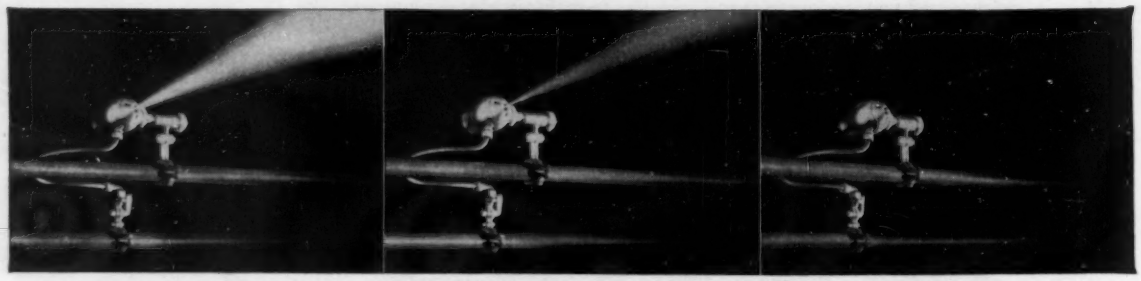

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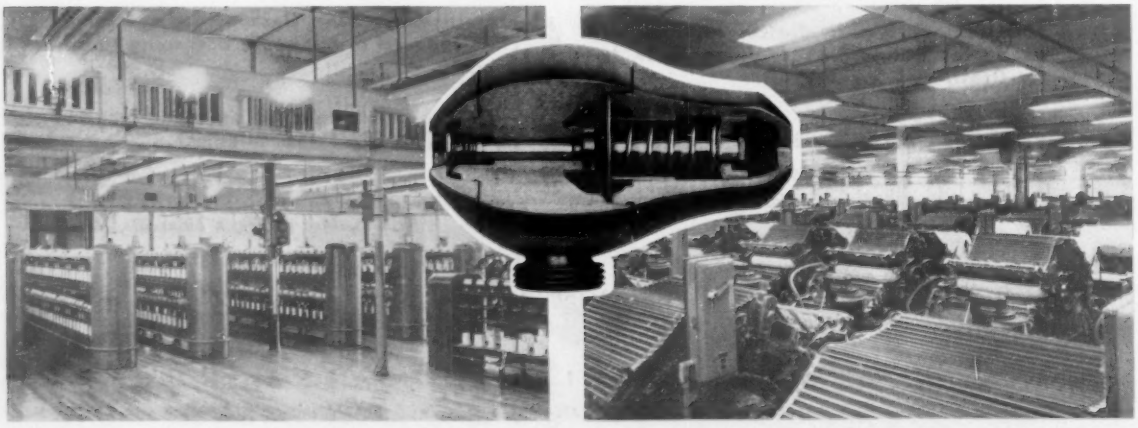

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Textile Industries
for
February 1955

News IN BRIEF

Are Wool Manufacturers Ignoring the Importance of Performance Tests? Performance tests of textile fabrics are being used more and more in advertising and promotional material, and more important, in legislation whose enforcement will depend on performance tests (such as the recent Flammability Act). It is up to the wool industry to see that performance tests do not achieve official standing without due recognition of wool's values. Although the wool industry is adequately represented on the committees of such standards-making bodies as ASTM

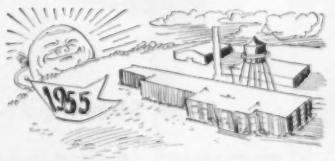
and AATCC, these representatives were conspicuously absent at recent meetings where performance tests were being evaluated on characteristics vital to maintaining wool's competitive position. The probable explanation for this absence is the recent cut-backs in technical personnel at many wool mills. This type of cost cutting may prove to be false economy if it results in the wool industry losing by default in the field of performance testing.—*News Letter for Wool Textile Executives.*

Oklahoma "Cowgirl" New Maid of Cotton. De Lois Faulkner of Sallisaw, Okla., was chosen the 1955 Maid of Cotton, succeeding Beverly Pack of El Paso, Texas, as the world ambassadress of the nation's cotton industry. Honey-blonde, blue-eyed, 5′ 6½″ tall, and weighing 120 pounds, the 20-year-old Miss Faulkner came from a ranch; but her father was a cotton grower before he turned to ranching at Sallisaw, enabling his daughter to become a "cowgirl." Fay Anthony of West Palm Beach, Fla., was chosen first alternate and Mary Lou Holliday of Galveston, Texas, second alternate.

Union Goals in 84th Congress. Major union goals in the 84th Congress, according to a report of the AFL Legislative Council, will be a boost in the minimum wage to $1.25 an hour, and repeal of the Taft-Hartley provision which permits states to enact "right-to-work" laws. Other points in the legislative program include shortening the work week from 40 to 35 hours, repeal of Federal tax exemption for local government bond issues for the purpose of attracting industry, disallowance of rentals paid by migrating concerns as business expenses, and repeal of the Fulbright Amendment to the Walsh-Healey Act. This latter Amendment permits judicial review of wage determinations made by the Secretary of Labor.

Census of Manufactures Under Way. American business stands back and takes a good look at itself this year for the first time since 1947. What it will see will be an economy which has outstripped the predictions of the most sanguine extrapolators of the Dow-Jones curve, the Bureau of the Census of the Department of Commerce states. The exact size in terms of men, dollars, bales, tons, and all the other units of measure of the business world will be reduced to cold statistics by the 1955 Census of Manufactures, now under way. This Census, which was authorized by the 83rd Congress after persistent urging by business, will be of inestimable value in determining location of new plants, planning sales and advertising campaigns, and in making a host of other decisions requiring detailed knowledge of the growth and realignment of American business in recent years. Since the value of the data finally published depends on the cooperation of all concerned, all firms are requested to fill in their reports completely and accurately, and to return them promptly to the Bureau of the Census.

Improved Textile Outlook. "After many months of depressed business, textile manufacturers report a considerable improvement in volume took place in the last quarter of 1954 and a continuation of satisfactory mill activity is predicted for the first half of 1955 at least. In general, prices and profits are unsatisfactory, but these may be expected to improve under the influence of sustained volume."—Business and Defense Services Administration, U. S. Department of Commerce.



Copyright for Textile Designs? The Copyright Office is considering acceptance of industrial designs for registration, including those of textile fabrics. The Office has heretofore taken the position that protection of textile designs should be sought through a design

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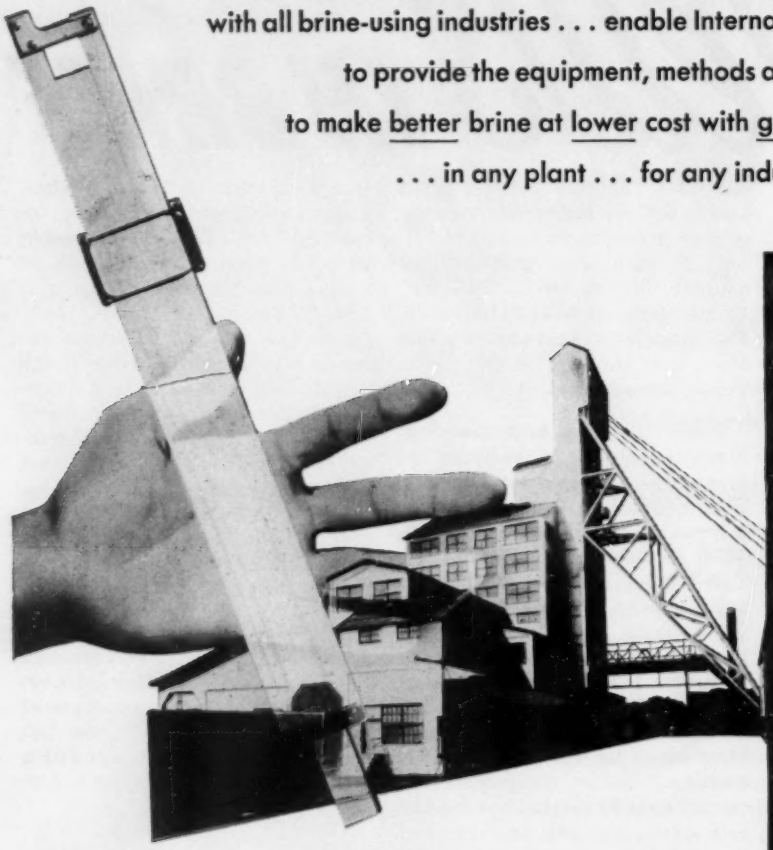

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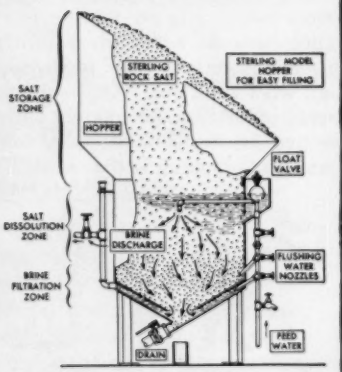
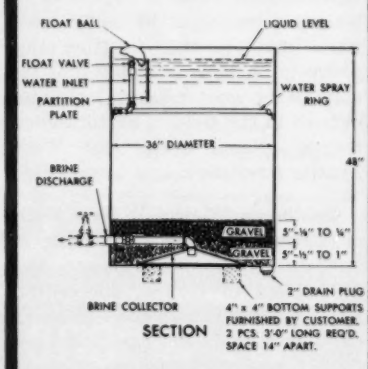


THE STERLING
EVAPORATED SALT DISSOLVER



SECTION

POWELL VALVES . . . THE COMPLETE QUALITY LINE . . . POWELL VALVES

. . . THE COMPLETE QUALITY LINE . . . POWELL VALVES . . . THE COMPLETE QUALITY LINE . . .

POWELL LUBRICATED PLUG VALVES

FIG. 3059G—300-Pound Steel Flanged End Valve. Sizes 6" to 12".

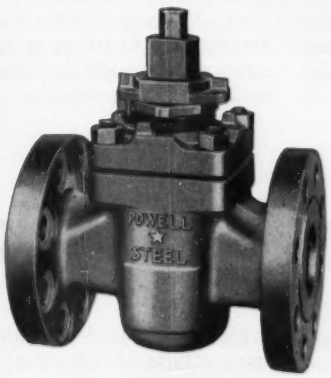


FIG. 1559—150-Pound Steel Flanged End Valve. Sizes 1" to 4".

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The Wm. Powell Company, Cincinnati 22, Ohio.....109TH year

patent, rather than by copyright registration. The present action of the Copyright Office appears to be aimed at deciding whether present copyright laws can be construed to include industrial designs, or if amendments must be made.

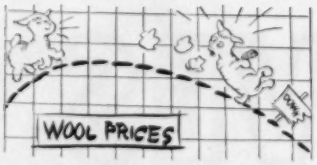
Union Studies Job Loads. A supplement to the "Textile Workers' Job Primer" [reviewed in TEXTILE INDUSTRIES for January, 1954, p. 149] has recently been released by the TWUA (CIO). Authored by Solomon Barkin and Sumner Shapiro, the supplement contains forms for calculating the creeling

and doffing frequencies of all machines in a cotton or rayon mill, from opening and picking through weaving. The supplement is designated as Research Department Technical Report T-121, "Forms for Calculating the Frequency of Periodic Work Duties," and is available at 75 cents from the Textile Workers Union of America, 99 University Place, New York 3, N. Y.

New Swiss Nylon. A new polyamide fiber, "Roylon," is now being manufactured in pilot-plant quantities by Kunstseidefabrik Feldmuhle AG, Rorschach, Switzerland. Starting point for the fiber is caprolactam, basis of nylon 66.

Where to Get Out-of-Print Textile Books. Out-of-print textile books are offered for sale by the American Library Service, 117 West 48th St., New York 36, N. Y. In addition to maintaining an extensive collection of scarce textile books and journals, the company offers a world-wide search service for specific items not stocked, and will buy or exchange technical books. A listing of textile books is available.

Outlook for Wool Prices. World wool prices will probably be higher in the near future, but the long-term picture is for lower prices. The sharp decline in prices from



the level of a year ago suggests that holding of wool is more attractive in the light of selling prospects for wool manufacturers, therefore wool prices should rise. However, there is little reason to assume that the current trend to increased production will be interrupted, and annual increases in the manufacture and use of man-made noncellulosic fibers have important significance. These latter factors, plus the tendency for a smaller proportion of consumer income to be devoted to clothing expenditures, should over-balance long-term trends in the growth of world population and result in lower wool prices.—Merrill, Lynch, Pierce, Fenner & Beane.

Chemical Finishing Conference to Atlantic City. The next Chemical Finishing Conference, sponsored by the National Cotton Council, will be held at Chalfonte-Haddon Hall, Atlantic City, N. J., on September 20 and 21, 1955, immediately preceding the national convention of the AATCC.

More Money for Cotton Research? By 1965 the amount of federal money needed for a satisfactory level of research in cotton production, utilization, and marketing will be about $11,200,000, more than two and a half times the amount budgeted for 1954, according to the USDA's Advisory Committee on Cotton and Cottonseed Research and Marketing. Reasons put forth are that present appropriations are inadequate, and future research findings will un-

"Industry support of public relations

By Roger Milliken

EXCLUSIVE

AS A CLOSE observer of the work of Textile Information Service since its inception eight years ago, I believe that one of the biggest dividends the textile mills have received from this program has been the value of the "case histories" and examples of techniques revealed to them through TIS efforts.

This important facet of our public relations program is too often neglected when "results" are being examined. The textile industry in the past was always secretive and generally unwilling to permit the dissemination of information about its operations. Although this attitude was understandable, it left a great void in public understanding of our problems.

The overcoming of our traditional reluctance to let ourselves be better known has been one of the outstanding achievements of the TIS program, in addition to the impact of the steady stream of information it pours out to the general public.

Textile Information Service has greatly stimulated the public relations efforts of individual mills. I have seen scores of instances where mills have begun to engage in activities and practice techniques which they have learned through the work of TIS. The result has been to create a better public attitude toward their own individual operations both in their own community and with the public at large.

Too, the mills and the organized groups representing them have made effective use of the professional resources available to them through the facilities of Tex-

doubtedly come slower and harder and at greater cost.

Standards for Leather Aprons and Tapes. Dimensional standards and installation instructions for leather aprons and tapes for use on textile machinery have been developed by the Textile Leather Division of the National Industrial Leather Association and are published in a 16-page book entitled "Leather Aprons and Tapes for the Textile Industry." The book covers combs, gill boxes, Pacific Converters, and card condensers.

Canadian Textile School Grads in Demand. Demand by the Canadian textile industry for graduates of the St. Hyacinthe Textile School, St. Hyacinthe, Quebec, reached a new high in 1954, according to Georgess Moore, director of the school. Paradoxically, the present difficulties of the Canadian textile industry were partly responsible for the increased demand. According to Mr. Moore, the industry realizes the importance of trained technical personnel in fighting competition from imported goods.

TEAM Day at N. C. State. The School of Textiles, N. C. State College, will be host to officers and directors of the American Textile Machinery Association and to officials of member firms of the association on TEAM (Textile Education and Machinery) Day, February 15. The purpose of the occasion is to acquaint members of the ATMA with the application of their equipment in textile education and research, according to M. E. Campbell, dean of the School.

How to Whiten Use-Discolored Nylon. The Du Pont Co. has released details of a four-step method by which use-discolored nylon fabrics may be whitened. The first step is a thorough wash in either soap or synthetic detergent, followed by steeping in a commercial color remover. The garment is then soaked in a bleach such as Clorox, and is finally rinsed in a commercial whitener. To prevent discoloration in the first place, Du Pont advises that white nylon garments never be laundered with colored fabrics, even pastels, that the garments be given a thorough laundering regularly, and that a water softener be used in hard water areas. Yellowing can also be caused by extreme heat, either in drying or ironing.

News in Brief

Recent Labor Rulings. The National Labor Relations Board has

ruled that an employer who pleads competition as the reason for refusal to pay a wage increase demanded by a union must substantiate his claim by opening his books to union scrutiny. Refusal to do so constitutes refusal to bargain, according to NLRB. . . . Ruling of Federal District Court of Massachusetts states that a strike called by a union in violation of an arbitration clause which provided "the exclusive means of adjudicating all matters" constituted a breach of contract, even though the contract did not contain a no-strike clause.

Wet Processing Bibliography Completed. A complete literature

(Continued on page 211)

program is an investment--no luxury!"

tile Information Service. Booklets, films, film strips, exhibits, speeches, charts, statistics, photos, pattern stories, and features, as well as advice and on-the-spot assistance, have proved a boon to many mills and association groups who have supported the program and taken advantage of the many opportunities such a professional operation has to offer.

Textile Information Service, particularly in recent years, has rendered valuable service to the textile industry by acting not only as the medium of expression for the textile industry's news and views in matters of national and international importance but by frequently contributing valuable public relations counsel and active assistance in the conception and delineation of such news and views.

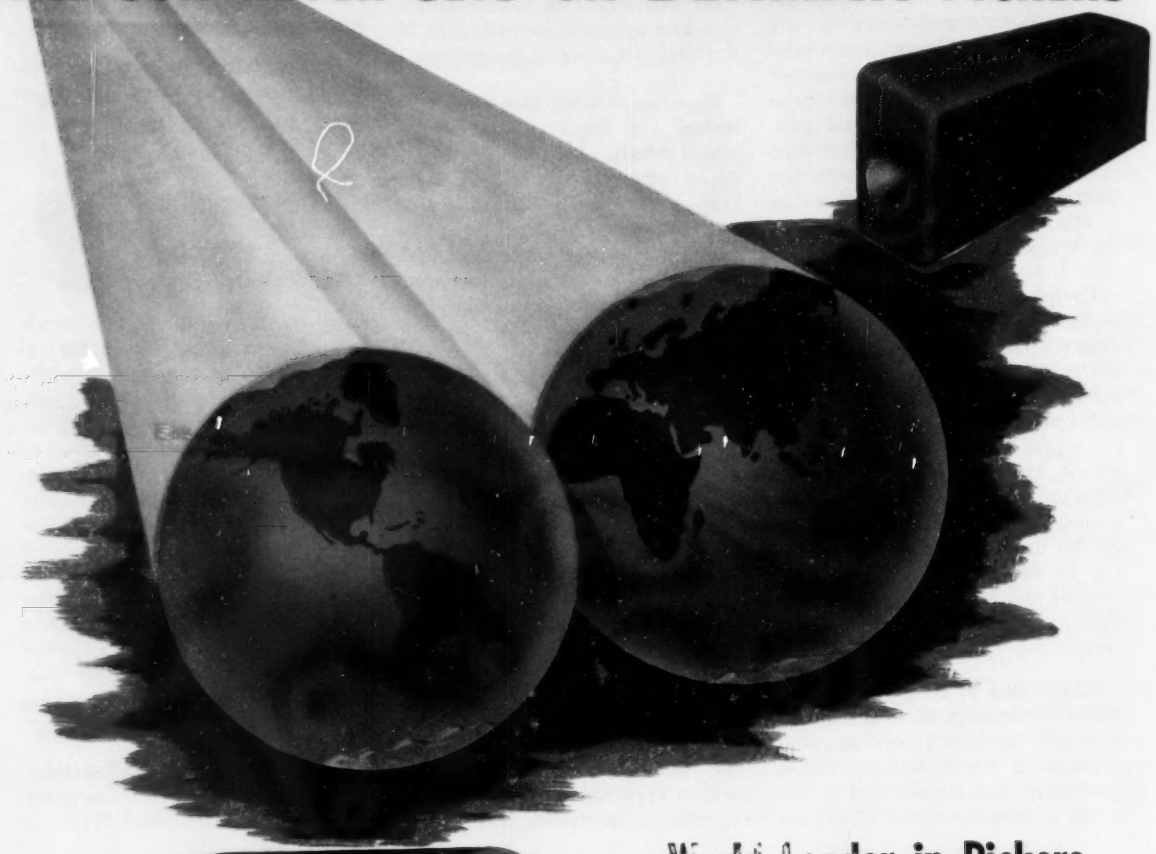
Each time TIS performs such a service for the industry as a whole the direct benefits accrue to each and every member of the industry whether it is lending financial support to the public relations program or not.

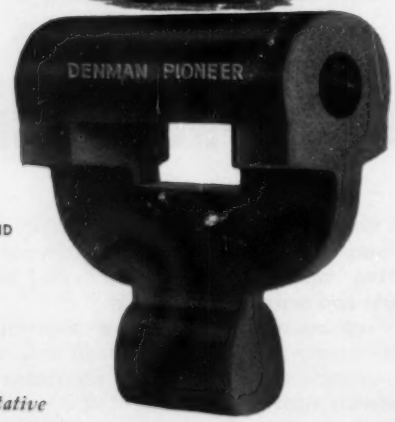
If we concede that an effective public relations job has been done for the industry in past years with the funds available, then it must naturally be conceded that a more effective job could be done with more funds.

The budget available for operations this fiscal year, which began October 1, represents only about 60 per cent of the funds available in past years and, in my estimation, only about 30 per cent of the funds an industry of the size and scope of textiles needs to do a real proper job.

Your support of this program as a member of the textile industry is an investment and not a luxury.

THE SUN NEVER SETS ON DENMAN PICKERS





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AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

Short Sighted Free Trade Policies

WE HAVE been saying for some time that the free trade policies of some American farm groups were shortsighted. In earlier columns in this same space we have singled out the cotton farmer for special attention because we have felt that, dealing in a commodity which is largely consumed at home, he had more to lose than perhaps any other farm group.

It is not difficult to see that the erasing of tariff barriers would hold some lures for the farmer because he views the growing textile industries of Japan, India, and other countries with considerable interest. Who is to say that his hopes of dissipating the cotton surplus through sales to these foreign countries are wishful thinking?

Nevertheless, it has been our feeling for sometime that mills in Japan and India are not going to buy American cotton if they can get any other cotton a fraction of a cent cheaper. They are going to buy the cheapest cotton they can find, and the American price support system for agricultural commodities is going to guarantee, if nothing else does, that American cotton is going to lose out in the competition.

It has seemed to us that the American cotton farmer has been trying to ride two wild horses with one foot in the saddle of each, because he has hoped that by espousing free trade policies he could open the doors of foreign nations to his cotton, while at the same time enjoying complete protection at home in his sales to domestic mills. We have asked the question before, but it will bear asking again: Have you ever tried buying a couple of thousand bales of foreign cotton to run in your own mill?

End of a Dream

It seems now that this little Shangri-La of protection may be coming in for some international scrutiny, and we cannot help but wonder — sadistically perhaps — how the internationally minded, do-good-abroad boys are going to like the shoe when it is on the other foot. A United Press release of a few weeks ago, commenting on the ninth GATT session, noted that the thirty-three nations would consider, among other things, *"governmental domestic agricultural policies, particularly United States protective legislation. . . ."*

We do not like to put ourselves in the I-told-you-so category, but honesty compels us to report that we said in this same space many months ago that one of these days the international boys were going to get around to taking a look at the most "protected" market in the world—the American farm market.

If the time ever comes when the United States permits foreign cotton to come into this country without hindrance and without quota, then that is going to be the day when you will have great difficulty in finding any more free trade cotton farmers. Just as there were no atheists in foxholes, so also are there no free traders whose own lives are threatened by foreign competition.

About the ACMI Brief Filed at CRI Meet

Somewhat along the same lines, and developing what was to us a completely new train of thought, is the brief filed by American Cotton Manufacturers Institute at the meeting of the Committee for Reciprocity Information. (You may be confused by all these names, but so are we. Just take our word for it that CRI has something to do with tariffs.)

The ACMI statement, which was presented orally by R. H. Jewell, Crystal Springs Bleachery, Chickamauga, Georgia, makes what we think is the exceptionally strong point that the current negotiations are a direct threat, not only to the American cotton textile industry, but to the life of the American cotton farmer. The brief points out that the United States has laid on the bargain table practically the entire list of cotton manufactures, has excluded fabrics made of synthetics, but has included synthetic yarns.

The effects of this triple play are rather obvious. Nearly all cotton goods and synthetic yarns would be allowed to come in at greatly reduced rates and this would mean that not only must the cotton farmer and the cotton manufacturer compete with cheaply made foreign cotton goods, but they must also compete with American-made synthetic goods which have been woven from cheaply made foreign synthetic yarns.

"No better device than this," says the ACMI brief, "could be contrived to sound the death knell of the American cotton farmer along with the American cotton

Get the JUMP on Competition

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Cut distribution costs and increase profits — build *your new plant* on this ideal site at Fort Valley, Georgia.

- 200 acres of level terrain adjacent to Central of Georgia Railway, situated in heart of a thriving market of 22 million people.
- Located six miles west of city limits of Fort Valley, 34 miles from Macon.
- 2,800 foot frontage on Flint River.
- Minimum flow at site 193,881,600 gallons per day.
- Also ample underground water supply.
- Advantageously located for textile and chemical plants or other industries requiring large amounts of water.
- Fast, reliable daily freight service via Central of Georgia Railway connecting directly with 15 major railroads and Seatrain at Port of Savannah.
- 5,670 foot frontage on State Highway 96, which connects with U. S. Highways 341 and 19.
- Population of 89,978 within 25-mile radius.

This site is adaptable to almost any type of industry. *Investigate* by writing, in strict confidence, for maps and complete data. The Industrial Location Specialists of Central of Georgia and S&A will gladly work with you on your re-location problems.

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CENTRAL OF GEORGIA
The Right Way . . .
RAILWAY

manufacturing industry. This conclusion seems so obvious that one cannot help wondering whether the authors of the negotiable list had in mind a flank attack on our agricultural support program."

This writer is not certain that he would view such an attack with any great degree of alarm, but nevertheless the implications for cotton farmer and for the cotton manufacturing industry are terrific. If American farm groups understand in time the dire consequences of the reciprocity program, then perhaps the cotton farmer and the cotton manufacturer, together, can save the remnants of the industry.

What! No Automobiles?

We must confess to a somewhat jaundiced opinion with regard to the free trade viewpoint of another segment of the American economic scene—the automobile industry. We have taken a dim view of all the chest-beating that has emanated from Detroit which has said in effect that we should reduce tariff walls everywhere, especially in the United States, so that the world might see an end to poverty and an end to wars. With tongue in cheek, we have felt that the automobile manufacturers were relatively safe in this viewpoint, because they had nothing to fear save the fickle desires of a small sports-minded group which fancied speedy little cars made in England or Italy.

But, remembering the ringing phrases which had come from Detroit, we had every assurance that the current list of items upon which the United States was going to consider tariff reductions would include a long and sizeable list of automobiles, specifying in great detail number of cylinders and size of body, and perhaps even the number of wheels and the number of carburetors. But not so! As the ACMI brief points out, automobiles are conspicuously absent from the list. Can it be that the mighty automobile industry will fight for free trade to the last American textile mill?

What Are We Getting?

And now to bring this somewhat bombastic piece to a conclusion, we would like to ask a question we have asked before. True, we have not received any answers but there is no law against hoping. Two or three months ago we commented upon the lengthy list of items which the United States had said that it would consider sacrificing. Like Abou Ben Adhem, the textile industry led all the rest. In effect, the United States was saying to the thirty-

(Continued on page 217)

FEBRUARY

Feb. 4.—54th annual banquet **Philadelphia Textile Institute Alumni Association,** Warwick Hotel, Philadelphia, Pa.

Feb. 11—Meeting **Washington Section AATCC,** Washington, D. C.

Feb. 16-18 — Cotton Research Clinic, sponsored by the National Cotton Council, Pinehurst, N. C.

Feb. 25—Meeting **Hudson-Mohawk Section AATCC,** Albany, N. Y.

Feb. 25—Meeting **New York Section AATCC,** Skytop, Hotel Statler, New York, N. Y.

MARCH

Mar. 4—Meeting **Niagara Frontier Section AATCC,** Hamilton, Ontario, Canada.

Mar. 10-11—Annual meeting, **Textile Research Institute,** Hotel Commodore, New York, N. Y.

Mar. 17-18—Spring meeting **Southern Textile Methods and Standards Association,** Clemson House, Clemson, S. C.

Mar. 18—Meeting **Western New England Section AATCC,** Rapp's Restaurant, Shelton, Conn.

Mar. 31-Apr. 2—Annual meeting, American Cotton Manufacturers Institute, Palm Beach (Fla.) Biltmore Hotel.

APRIL

April 13-15—50th anniversary meeting, **Alabama Cotton Manufacturers Association,** Hotel Buena Vista, Biloxi, Miss.

*April 14-16—Annual convention **Phi Psi Textile Fraternity,** Baconsfield Hotel, Brookline, Mass.

April 25—Annual meeting, **National Association of Hosiery Manufacturers,** Claridge Hotel, Atlantic City, N. J.

April 25-26—Hosiery Industry Conference, Claridge Hotel, Atlantic City, N. J.

April 25-29—Knitting Arts Exhibition, sponsored by N.A.H.M., N. K. O. A., and Underwear Institute, Atlantic City (N. J.) Auditorium.

April 27-29—55th anniversary convention, **Cotton Manufacturers Association of Georgia,** Boca Raton Hotel & Club, Boca Raton, Fla.

April 28-29—10th **Time Study and Methods Conference,** sponsored by the Society for Advancement of Management, Hotel Statler, New York City.

April 29-30—31st annual convention **Delta Kappa Phi Fraternity** of America Inc., Lowell, Mass. Host, Beta Chapter of Lowell Technological Institute.

April 30—Meeting **Piedmont Section AATCC,** Robert E. Lee Hotel, Winston-Salem, N. C.

MAY

May 4-5—Spring meeting, The Fiber Society, Alabama Polytechnic Institute, School of Textile Technology, Auburn, Ala.

May 12-14—Annual outing Carolina Yarn Association.

JUNE

June 16-18—Annual convention, **Southern Textile Association,** Mayview Manor, Blowing Rock, N. C.

June 16-20—Materials Handling Exposition, International Amphitheatre, Chicago, Ill.

June 25-July 10—International Textile Exhibition, Brussels, Belgium.

June 27-29—International Congress of Scientific Research Applied to the Textile Industry, Brussels, Belgium.

SEPTEMBER

Sept. 8-9—Fall meeting, The Fiber Society, Massachusetts Institute of Technology, Cambridge, Mass.

Sept. 20-21—The Chemical Finishing Conference sponsored by the National Cotton Council of America, Chalfonte-Haddon Hall, Atlantic City, N. J.

Sept. 22-25—National convention, **AATCC,** Chalfonte-Haddon Hall, Atlantic City, N. J.

Sept. 29-30—101st annual meeting of **National Association of Cotton Manufacturers** and 3rd annual meeting of **Northern Textile Association,** Wentworth-by-the-Sea, Portsmouth, N. H.

OCTOBER

Oct. 13-14—49th annual meeting **North Carolina Textile Manufacturers Association,** Carolina Hotel, Pinehurst, N. C.

**Date and place of this convention changed from previous listing.*

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Made From the Finest Hickory and Dogwood

Box Fronts
Crank or Pitman Arms
Creel Sticks
Harness Roll Bearings
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Laysword Reed Caps
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JACOBS

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Charlotte, N. C.

NORTHERN DIVISION
Danielson, Conn.

NEW Equipment AND MATERIALS

Repairing loom beams by the Beamweld Process.

Mills Can Lease Machine for Repairing Loom Beams at Low Cost

A service now available to textile mills is the Beamweld Process of repairing loom beams in which a specially designed machine is utilized by personnel in the mill machine shop to recondition about 20 beams per shift at a cost that is said to be approximately half that of a new beam. This beam repairing machine is not for sale to the mills, but instead is available on a lease basis. The manufacturer of the machine delivers it to the mill and sets it up in the mill shop ready for operation by mill personnel.

In the process, after the removal of old journals, the stub ends are drilled and chamfered on center and receive a specially prepared new journal with a dowel which fits into the center. This is held in perfect alignment while welding in place.

The welding is accomplished rather rapidly (while the beam is turned by hand) with the aid of a newly-developed welding rod which produces a very dense and easily-machinable weld.

A jib hoist is provided to eliminate lifting, which allows one man to handle the complete job. The beam is held on a turntable so that the operator does not have to leave his seat to work on the opposite journal.

Beamweld Co., Camden, S. C.

For additional data, request item B-101, using Handy Return Card on page 187.

For Maximum Production of "Stretch" Synthetics with Minimum Investment

Universal Winding Company has announced the release for sale of its new Number 550 Leesona Stretch Yarn Machine which has been designed to meet the requirements of the many applications of the "stretch" synthetics. It provides for maximum production at a minimum investment in machinery and floor space.

Simultaneously, the company announced the acquisition by purchase of the Permatwist patent applications, which broadly cover the processes and apparatus necessary to the continuous process manufacturing of these "stretch" yarns, and the purchase of existing Permatwist or so-called "Fluflon" licenses. This enables Universal to offer a choice of two alternative types of equipment.

Universal Winding Co., P. O. Box 1605, Providence, R. I.

For additional data, request item B-104, using Handy Return Card on page 187.

14" Coiler Changeovers for Saco-Lowell Drawing Frames

Fourteen-inch coilers for older 5-roll, 4-roll, and 3-over-4 roll Saco-Lowell drawing frames are now available as replacements for smaller-diameter coiler assemblies. The changeover requires only a minimum

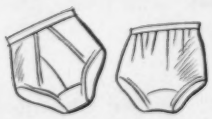
of new coiler head and turntable parts, yet will increase drawing frame efficiency because of longer runs between doffs, as well as reduce direct labor costs.

The new coiler uses an "over-center" lay in which the coil diameter is greater than the radius of the can. This larger lay not only produces a more uniform pattern in the bottom of the can, eliminating the tangling

WHEN IT'S TURBO SET, IT'S "*Set for life*"

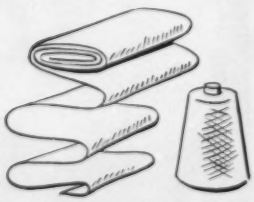
WOMEN'S STOCKINGS

MEN'S AND CHILDREN'S SOCKS



MEN'S AND WOMEN'S BRIEFS

SWEATERS



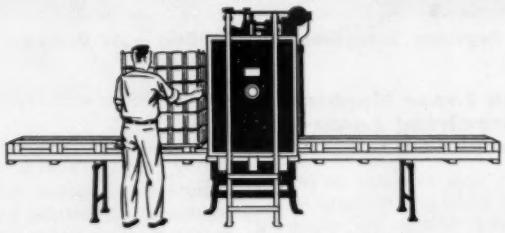
FABRICS AND YARNS

Set your synthetics the proven way — with Turbo penetration to assure quality setting that stays "set".

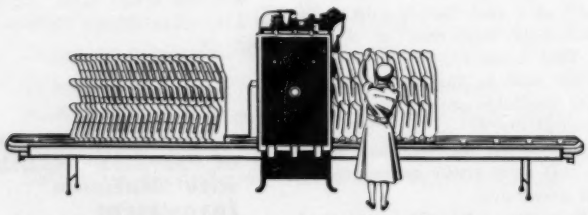
Do it with vacuum — do it with pressure — or do it with both. Turbo equipment gives you the choice to get the setting you need. And, with a Turbo, the heat really penetrates all the way for absolute uniformity throughout the entire load.

A Turbo takes the guesswork out of setting. Automatic operation, timing and temperature controls reduce the human-error factor to a new low. Work moves along smoothly and easily on a preplanned schedule. While one load is being set, the operator prepares the second which automatically moves into the setting chamber — a Turbo "thinks for itself".

For fast, accurate setting, set modern fabrics the modern way, with a Turbo. There are machines for women's stockings, men's and children's socks, sweaters, underwear, yarns and fabrics. If you have a particular problem, Turbo engineers can adapt standard machines for you, or design one to specifically meet your needs. Talk to a Turbo Representative soon and get the whole profitable story.



The Turbo Yarn Setter . . . capacity, 300 pounds per load at steam pressures up to 45 pounds per square inch. Automatic timing and temperatures, assure high quality results, vital in setting and processing stretch yarns.



The Turbo AD-48 . . . a dual-purpose machine that preboards with steam, finish boards with heated air. Illustrated on the conveyor are the new Turbo Triple-forms that give you three times the production of children's socks and anklets.

TURBO
SINCE 1929

TURBO MACHINE COMPANY, LANSDALE, PENNA., U.S.A.

Southern Representative: F. W. Warrington Co., Charlotte, N. C.

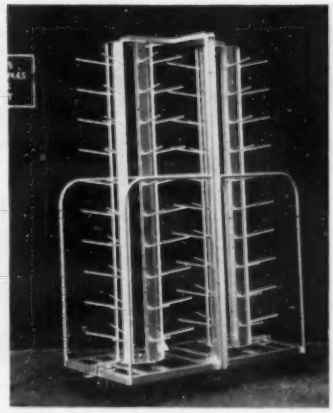
Manufacturers of precision hosiery finishing machinery, also Crimpers, Crimp Setting Equipment, and Tow Processing Equipment

of sliver; but also eliminates the hard core of sliver at the top of the can. Thus pyramiding of the stock in the center of the can, necessitating premature doffing, is avoided.

The 14" coiler assembly consists of a horizontal coiler shaft driven by helical gears in the tension gear train, to which bevel gears are attached for driving the coiler head through a compound bevel gear, and driving the turntable through the upright shaft.

Saco-Lowell Shops, 60 Batterymarch St., Boston, Mass.

For additional data, request item B-102, using Handy Return Card on page 187.



Rotary pin truck by Paddock.

New Floor Sealer Does Not Darken with Age

Floroseal Lumx is a floor sealer which will not darken regardless of the number of coats applied, eliminating floors becoming darker and more unsightly with each succeeding application.

This new plasticized-resin seal seeps into the pores of the floor and makes it resistant to grease, oil, dirt, and moisture. The seal is easy to apply and dries to a satin smoothness in one to two hours.

Only a minimum of time and labor for daily maintenance is necessary with a Floroseal Lumx floor. A daily dry mopping with a Flortone treated mop is sufficient to remove surface dust.

In plants with concrete floors Floroseal Lumx keeps the concrete from dusting and deteriorating with wear. Wood floors benefit from this new seal which keeps them looking fresh and new.

The Selig Co., 342 Marietta St., N.W., Atlanta, Ga.

For additional data, request item B-121, using Handy Return Card on page 187.

Rotary Pin Truck Saves Steps and Space

A rotary pin truck now on the market saves steps by transporting the work to the operator. More pins can be put on a smaller chassis which requires less storage space when idle.

The rotors are mounted on ball bearings for easy turning, and a foot latch stops pins at the proper position.

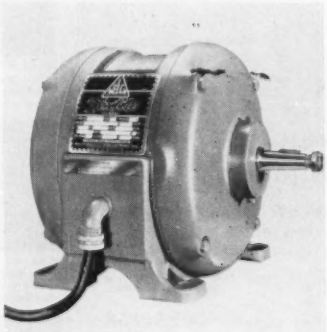
The truck can be designed and built to fit any requirements. Sizes are limited only by aisle widths.

J. C. Paddock Co., P. O. Box 275, Spartanburg, S. C.

For additional data, request item B-109, using Handy Return Card on page 187.

New Loom Motor

The optimum combination of inertia and slip incorporated in the rotor design of Delco loom motors eliminates the necessity for an external flywheel. Rotor conductors, end-rings, and fin blades are uniflow



die-cast in one operation, eliminating the possibility of high-resistance connections. Maximum quietness is assured by the closed-slot rotor design and accurate dynamic balance of the assembly.

Heavy duty ball bearings are semi-maximum type with oversize bearing on shaft end of motor. Bearings are sealed on interior side and open on reservoir side. Large reservoir in bearing housing holds sufficient grease to last for years. Filler and relief plugs are provided for relubrication, when required, without disassembling the motor.

Winding is completely protected from moisture and vibration. Machined press-fit of stator in main frame provides maximum contact area for even heat dissipation.

Sturdy cast-iron, non-corrosive frame and end frames are accurately machined for perfect, permanent alignment. Totally enclosed construction, with smooth exterior finish and minimum of projections, provides complete protection against lint and dust.

Delco Products, Division of General Motors Corp., Dayton, Ohio.

For additional data, request item B-112, using Handy Return Card on page 187.

New, Lasting Anti-Static for Synthetic Fabrics

Niatex Anti-Static AG-1, a durable anti-static for use on synthetic fabrics, is applied by padding and fixed on the fabric by heat treatment. It gives lasting anti-static protection even after repeated washing and dry cleaning and has little or no effect on the hand of the fabric.

Anti-Static AG-1 can be applied in conjunction with crease-resistant or water-repellent finishes.

Carbide and Carbon Chemicals Co., 30 East 42nd Street, New York 17, New York.

For additional data, request item B-116, using Handy Return Card on page 187.

Portable Ultra-Violet Unit for Fluorescent Analysis

A new "Mineralight" long wave ultra-violet lamp is particularly adaptable to the textile industry.

When directed at certain substances, the invisible "black light" rays cause a phenomenon known as fluorescence, whereby these substances radiate a color different from their own. Thus variations that are invisible, or nearly so, in ordinary white light, stand out with startling clarity when exposed to ultra-violet. This makes the lamp extremely useful for (1) observing, analyzing and comparing materials, weaves, and dye lots, (2) inspecting for flaws and

TRUST COMPANY OF GEORGIA

ATLANTA

Condensed Statement of Condition

December 31, 1954

ASSETS

Cash on Hand and Due From Other Banks		$ 54,612,833.21
United States Government Obligations	$43,215,618.95	
Municipal Bonds	11,603,032.07	
Other Securities	516,217.84	
Total Securities		55,334,868.86
Loans and Discounts		74,352,874.69
Overdrafts		2,399.00
Banking House		2,192,361.83
Customers' Liability on Acceptances and Letters of Credit		801,849.58
Accounts Receivable and Accrued Interest		1,299,747.59
Prepaid Expenses and Other Assets		270,329.00
TOTAL		$188,867,263.76

LIABILITIES

Capital	$ 4,000,000.00	
Surplus	6,000,000.00	
Undivided Profits	3,399,129.67	$ 13,399,129.67
Reserve for Contingencies		1,115,689.95
Reserve for Expenses, Taxes, etc.		1,522,523.67
Acceptances and Letters of Credit		801,849.58
Accounts Payable, Unearned Interest, etc.		975,729.64
Deposits (*Including U. S. Treasury Tax and Loan Accounts)		171,052,341.25
TOTAL		$188,867,263.76

*U. S. Treasury Tax and Loan Accounts . . . . $ 5,112,661.89

Assets carried at $24,205,612.88 above are pledged to secure public funds (including U. S. Treasury Tax and Loan Accounts), Trust Balances and other Liabilities as required by law.

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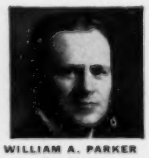

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Railroad Company

variations, (3) "invisible" marking during manufacture, (4) locating oil spots on fabrics and determining their origin, and (5) displaying and merchandising manufactured items.

Underwriters' Laboratories approved, the new unit consists of a Model SL 3660 long wave Mineralight for a-c operation, and a 6-volt adapter for use with a portable Hot Shot battery or other 6-volt source.

Ultra-Violet Products, Inc., South Pasadena, Calif.

For additional data, request item B-110, using Handy Return Card on page 187.

Larger Cloth Guider Roll Can Be Reground

A new development in the air guider field is the use of a 2¾" rubber cradle roll. The new, larger size roll is much more economical than the smaller roll because it has to be re-covered less often.

Since the roll has an outside diameter of 2¾" and an inside diameter of only 1¼" there is ¾" of rubber all around. Thus, it is economical to regrind the large diameter roll in the event that it becomes grooved, shouldered, or coned in service.

The new roll is made with a shaft to fit the cradles of all air guiders. Concerns which use two or sometimes three makes of air guiders will now have to carry only this one size roll and one size bearing in stock.

In addition to supplying the new rolls for all makes of existing guiders, the manufacturer is equipping his new guiders—air, electric, and mechanical—with them.

Guider, Roll and Service Co., P. O. Box 3747, Peninsula Station, Daytona Beach, Fla.

For additional data, request item B-111, using Handy Return Card on page 187.

Much Less After-Odor with New Textile Finish

A new "R-300" textile finish reduces formaldehyde after-odor to the vanishing point. It permits crisp finishing of nylons with much lower after-odor and finishing room odor, but without any increase in cost over ordinary finishes. Nor is there any special application method required. R-300 is used exactly like present finishes. This new finish provides better results in terms of finish, hand, durability, and washability.

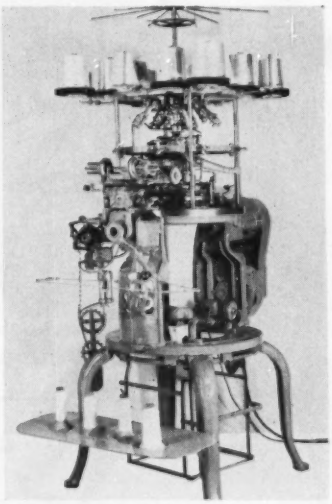
Jersey State Chemical Co., 59 Lee Avenue, Haledon, N. J.

For additional data, request item B-120, using Handy Return Card on page 187.

Machine Knits 11 Dozen Girdle Blanks in 8 Hours

The Scott & Williams DRC Universal Rubber Shaping Rib Machine has been designed and engineered for the knitting of girdle blanks made from bare or uncovered rubber thread. The bare rubber may be of the cut or extruded type.

The feeding of the bare rubber to the machine is controlled by a stretcher which accurately controls the amount of rubber being delivered



to the machine. The stretcher is automatically controlled so that the amount of rubber being delivered to the machine may be changed in order to give shape to the girdle blanks.

The accuracy of the stretcher is reflected in the blanks as they are free of pulls which many times causes the sides of the blanks to be uneven. The stretcher will accommodate 8 ends of bare rubber. It is equipped with a moistener which uniformly covers the rubber with a film of synthetic or vegetable oil. The oil does not have any deteriorating effects on the rubber but gives it better knitting qualities.

The girdle blanks may be knit to a predetermined length and automatically shaped so that the top will be narrower than the bottom. A wide variety of patterns are obtainable

NEW Equipment AND MATERIALS

from the patterning wheels which are located in the cam ring sections. The patterning is also automatically controlled so that the pattern may appear in the body of the girdle blank but have plain fabric in the top of it.

The machine is equipped with an air unit that is indispensable in the running of bare rubber which has a powder on it that will clog the latch slots in the needles and machine parts, unless it is blown from them.

The machine is a revolving cylinder type with a driven dial. A motor drive is provided, and either a Wesco or Crawford stop motion is available in accordance with the customer's desire. The machine is built in sizes ranging from 11" through 16" in diameter. All sizes are equipped with 8 feeds. The number of cuts per inch of diameter available on the dial and cylinder are 8 through 12. Production is approximately 11 dozen blanks in 8 hours including a 20% stoppage.

Scott & Williams, Inc., Laconia, N. H.

For additional data, request item B-107, using Handy Return Card on page 187.

New Beaming and Sewing Machine for Wet Processing

Birch Brothers' newly developed beaming and sewing machine consists of a metal let-off scray into which the small rolls of material are placed. This scray is fitted with an arrangement so that as the end of the roll is reached, it does not jump up and out of the scray when some of the machines are being run at high speeds.

The machine is fitted with a railway sewing machine of either the chain stitch or the butt-seam type, and the head is arranged to return to the beginning end automatically.

Following the sewing machine, there is an adjustable tension device from which the material passes to a pair of driven rolls, which govern the speed, tension, and the density of the center wound batch or beam of cloth.

The speed of the cloth being wound is kept constant through use of a fluid drive arrangement.

(Continued on page 195)

A print of this illustration in black and white suitable for line reproduction for use in your advertising, available free on request.

A FACT: In 1953, the average age of full-fashioned knitting machines in use in the United States was just over 10 years. In that same year, the average age of machines in mills that closed was almost 17 years. (Textile Machine Works, 1953 Statistical Survey)

In the hosiery industry, the one unyielding force is obsolescence. Compare the production of your least efficient machinery with a "Reading 100" Full-Fashioned Knitting Machine—in courses per minute, dozens per hour, salability of fabric. The "Reading 100" is not only a fast multiple-section machine, but it is also a reliable one . . . speed without interruption. And with every Reading Machine you get the benefit of Textile Machine Works' engineering help, service and technical experience. Let us present the "Reading 100" story in your office, at your convenience. Write us today.

TEXTILE MACHINE WORKS, READING, PENNA.

The "READING 100"
Full-Fashioned Knitting Machine

30 Sections 51, 60, 66 Gauge

Textile Industries
7th consecutive February issue featuring

Case History Reports

THE Case History Reports in this issue tell how textile mills are putting modern equipment to work on a profitable basis. That is the pay-off.

While reading the various equipment performance reports, remember that they are based on installations which have proved successful. Inasmuch as local conditions differ and few mills operate identically, try to fit the application of the equipment to your own plant. If you desire additional data, write to the editors or to the supplier of the equipment.

Remember also, when a new piece of equipment is made available to the industry, some organization had to pay for the research and development and some mill had to experiment with and test the equipment until it was ready to run on a production basis.

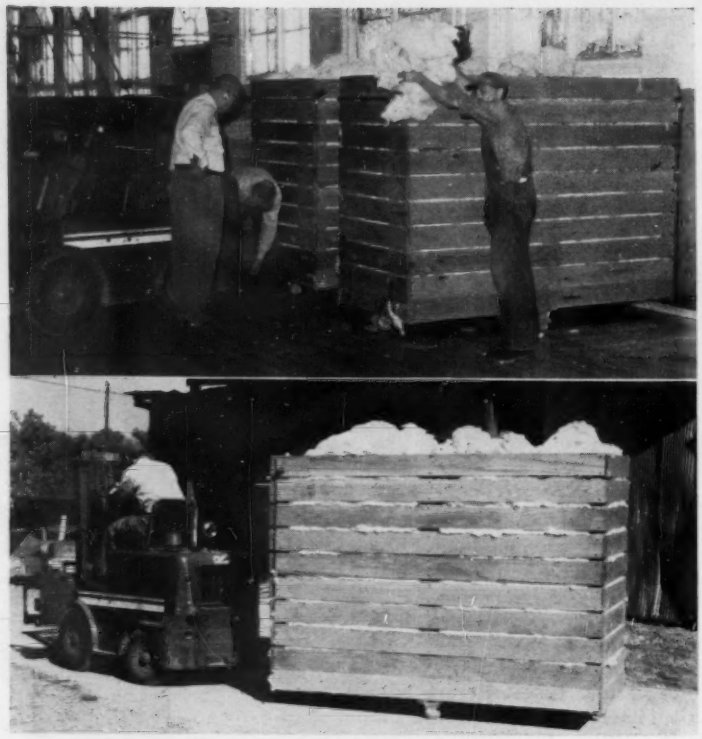
Research by suppliers of textile equipment has kept our American textile industry competitive in a highly competitive world market. But research is a joint venture—and credit also goes to those mills which are willing to devote time and ideas to the development of a product which eventually raises the level of the entire industry.

In this connection, be sure to read "The Measure of Progress," by Ringgold Arden, beginning on page 150 in this issue.

66 articles

tell how mills

- **save labor**
- **simplify jobs**
- **reduce waste**
- **improve quality**
- **increase production**



BALE-SIZE WASTE BOXES are located at strategic places in each department. Full boxes are coupled to lift truck and hauled to waste house. Note spring-mounted fog light on rear of truck. Similar light is on front of truck. They flash on and off to warn of truck's approach.

LOAD OF STRIPS goes directly into waste baling press.

Case 1

Bale-Size Boxes Cut Waste Handling Costs

EASTMAN Cotton Mills, Eastman, Ga., now collect all waste throughout the mill in bale-size boxes. This system has enabled the mill to save 86 2/3 man-hours weekly in its waste-handling. Waste does not have to be taken to the waste house as often, and the waste is put directly into the baling press from the waste box. In addition, 3,125 square feet of warehouse space has been released for cotton storage, and mixed waste has been reduced to a minimum.

In cooperation with Clark Equipment Co., the mill built boxes large enough to hold one bale of waste. The boxes are mounted on steel casters, and have slanted bottoms and easily removable tail gates. Boxes are located at strategic places in each department, and all waste is accumulated in these boxes, thus eliminating small bags of waste all over the department.

When a box is filled, it is coupled to a Clark lift truck and hauled to the waste house. The waste is baled directly from the box. This method eliminated waste bins, thereby releasing a portion of warehouse space. The baled waste is stored where the bins formerly were.

Before the boxes were built, approximately 225 trips per week were made by men carrying waste. With the present system, 20 to 25 trips with the lift truck are required. The operator of the waste baler can devote 50 per cent of his time to other duties, since he does not have to carry waste from the bins to the baling press.

Individual trips to the waste house are estimated to take 20 minutes of a man's time; by eliminating the need for 200 trips, a saving of 66 2/3 man-hours per week was effected. In addition, 20 hours per week of the waste baler's time are saved, for a total saving of about $80 per week. Investment in the waste boxes is about $1,000.

Case 2

Williams Unit Useful for Processes Other Than Dyeing

THE Williams unit has proved so successful for continuous dyeing of piece goods that is it widely employed in the application of vat, sulfur, naphthol, direct, and leucoester dyestuffs. In such continuous dyeing, Williams units serve not only for the dyeing step but also for oxidizing, rinsing, and soaping.

Now several mills are finding it unequalled also for the impregnation of fabrics in full width with chemical solutions for other purposes.

The peculiar advantages of a Williams unit are the short volume in which a relatively long immersion can be maintained for high production speeds and the

very thorough impregnation that takes place. The shortness of volume results from the design providing for the passage of cloth through narrow channels, the space between the loops being filled with removable baffles carrying rollers at the bottom. The thoroughness of impregnation follows not only from the rapid movement of liquor on both sides of the fabric (liquor carried along by the cloth from entry to delivery end is returned by gravity) but also from the pulsation of pressure of the liquor resulting from variation in the narrowness of the channel.

Experience at some mills has shown that a Williams unit with the usual squeeze at the exit end for regulation of pick-up and return of excess liquor to the circulation is more effective for this purpose than a three-roll padder. The kinds of chemical liquors with which textiles are already being impregnated in full width at high production rates include, among others, concentrated bleaching solutions of different kinds, strong caustic-hydrosulfite solutions for pigment-padded materials when reduction and development are to be carried out in a steamer, and mercerizing liquors for goods that are stretched in a tenter frame.

Case 3

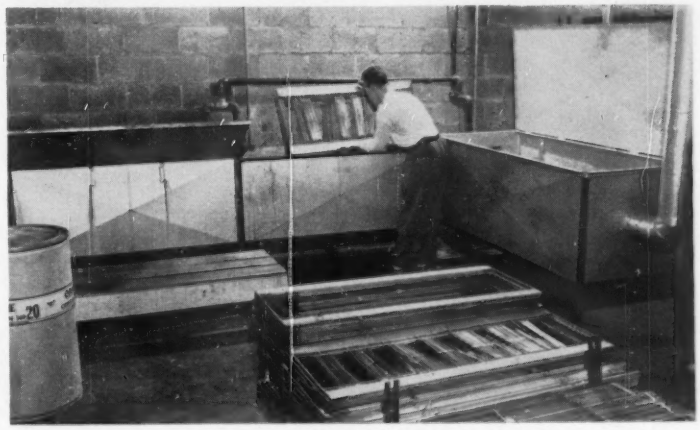
Mill Develops Efficient System for Cleaning Harness Assemblies

A PENNSYLVANIA weaving mill has worked out an efficient method for removing lint, grease, and dirt from heddles and harness frames.

The harness assembly is placed on a drainboard running the length of the front of a cleaning tank and is brushed with a hot solution of Oakite Composition No. 20. The drainboard arrangement makes it unnecessary to soak the frame in the solution.

After brushing, the frame is immersed briefly in a rinse tank in which the water is maintained at 120 to 140 F by means of an open steam line.

The final step is drying, in which the frames are suspended from steel brackets at either end of the dryer. Drying is accomplished by a unit heater, and moisture-laden air is removed with an exhaust fan.



HARNESSES are first brushed on drainboard of tank at left, then rinsed in middle tank, and finally dried in drying chamber at right.

Case 4

Mechanical Bobbin-Box Lifter Eliminates Lifting Hazards

BOBBIN - DUMPING MACHINE eliminates danger of injury to personnel from manual lifting of heavy loads.

KENDALL Cotton Mills, Pelzer, S. C., installed a portable elevating bobbin - dumping machine, and after seven months service is well pleased with the results achieved. The Sunray Company supplied the equipment to fill the mill's requirements.

Formerly, doffers dumped bobbins manually, and considerable trouble was experienced by operatives having back injuries and hernia. This mill has six yarn numbers and there is insufficient room available for storage bins; therefore, the yarn man had to use boxes to load the spoolers.

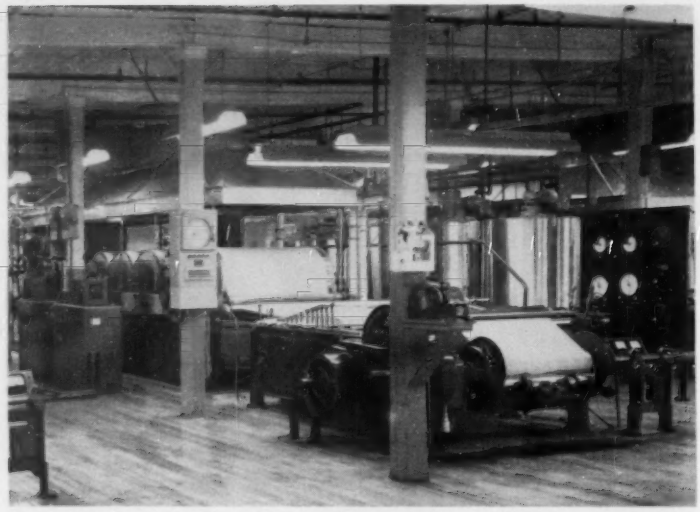
No one is allowed to pick up a box any more in this mill. The mechanical bobbin box lifter has eliminated injuries, and the doffers no longer complain about heavy lifting chores (the loaded bobbin boxes sometimes weighed 125-130 lb).

Morale is greatly improved, the

job is safer, and doffer efficiency is higher since the mechanical equipment for lifting bobbin boxes was installed. Furthermore, permanent injuries are no longer a problem from heavy lifting jobs; this was formerly a major problem of management.

The doff box is now pushed from the truck onto a platform equipped with ball bearing rollers. The yarn man pushes the box onto the mechanical box lifter when the yarn is needed, and a hand crank permits elevating and dumping the box quickly and easily (see accompanying illustration). Platform storage racks accommodate the yarn boxes until they are needed again.

Case 5



INSTALLATION of 9-cylinder high speed slashers at a southern mill. Production is 73 per cent greater than old slashers, labor costs are 38 per cent less.

High Speed Slashers Increase Production 73%

NINE-cylinder high speed slashers operate at 35 psi steam pressure in sizing yarn from dye beams and making the pattern on the front at one prominent southern mill. This mill also sizes some plain grey warps on the high speed slashers, which were furnished by Cocker Machine and Foundry Co., Gastonia, N. C.

Production figures on the largest volume pattern (which is a fairly heavy warp) in this mill are as follows: The old slashers ran 12 yards per minute at 55 per cent efficiency, netting 6.6 yards per minute of warp. The new slashers run 30 yards per minute at 38 per cent efficiency, netting 11.4 yards per minute. This represents approximately 73 per cent increase in production.

A statement from an official of this mill indicated that more floor space was used with the new slashers than with the old ones because a double creel arrangement is used on the new slashers. The old slashers occupied 6690 square feet of floor space as compared to 7987 square feet for the new ones.

If the new slashers were equipped with stationary creels like the old ones, the new slashers would require only 4391 square feet or about 66 per cent of the floor space used by the old slashers, thereby saving 34 per cent of the floor space.

Labor cost on the old slashers was $.01903 per pound. Labor cost on the new slasher is $.01377 per pound. These figures are based on an average of 10 weeks at normal production operation. Labor savings amount to approximately $420.00 per week, representing a 38 per cent reduction.

Power requirements were reduced from 47 hp per shift to 27 hp per shift, effecting a saving of 42.5 per cent.

The mill official stated that the new slashers helped weaving efficiency. However, since other changes were made in the weave room at the same time, it is difficult to pinpoint the exact proportion of improvement attributable to each change in this department.

Case 6

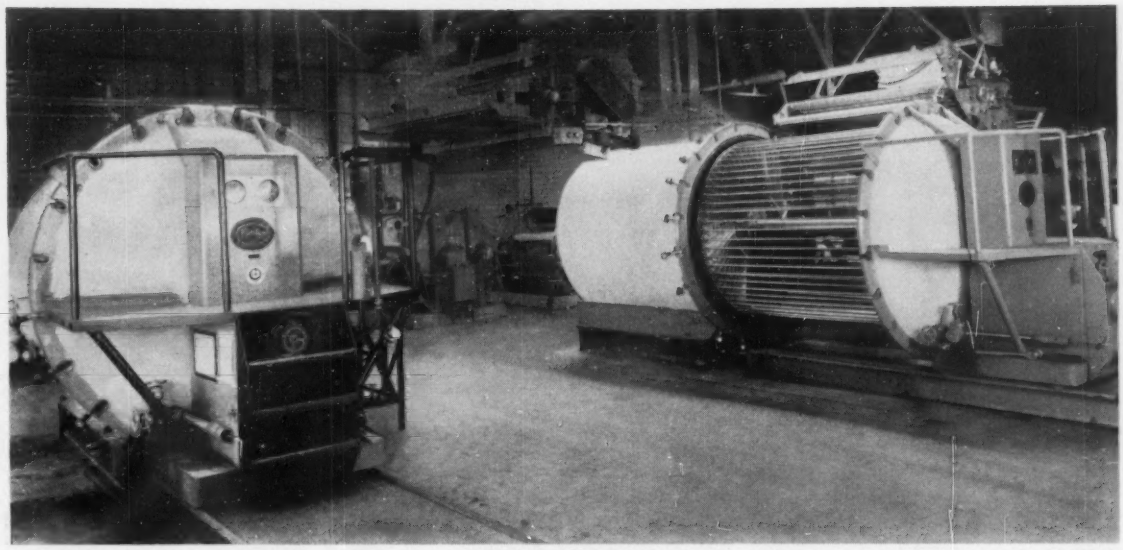
Measured Yardage Device On Quiller Saves 2 Cents Per Lb On Yarn Cost

PIEDMONT Plush Mill, Greenville, S. C., installed five 12-spindle Abbott radial quillers equipped with measured yardage device about a year ago. One quiller was tested for about six months before the installation was made.

Results have proved the equipment well worth the investment — the mill saves from 1½ to 2 cents per pound of yarn used.

The quillers were bought to secure uniform yardage on all quills used in double shuttle plush looms. Now that the quillers are in operation, the mill can buy yarn wound on cones instead of beams or ball warps, thereby saving about 2¢ per pound, depending upon the yarn market.

The new quillers wind within plus or minus 1 per cent the yardage they are set to run. This feature has proved to be a big asset in keeping waste to a minimum.



BAROTOR, shown in opened and closed positions, has reduced dyeing time of 9-oz Dacron tropical fabrics to one-third the time required when the goods were dyed in open becks.

Case 7

Improved Quality and Lower Cost In Barotor-Dyed Dacron

BAROTOR dyeing equipment, made by James Hunter Machine Co., was installed about 14 months ago at Abbeville (S.C.) Mills Corp. As a result of this installation, dyeing time was reduced to one-third the interval formerly required in an open dye beck. The comparison was made on 9-oz 2-ply warp and filling in 100 per cent Dacron tropical fabrics.

No carrier is necessary to swell the Dacron when it is dyed in the Barotor, thereby eliminating a big expense item as well as a hazardous chemical. This permitted at least a 10 per cent reduction in the cost of the dye bath. Approximately 10 per cent greater yield of color amounts to a 10 per cent saving in dyestuffs.

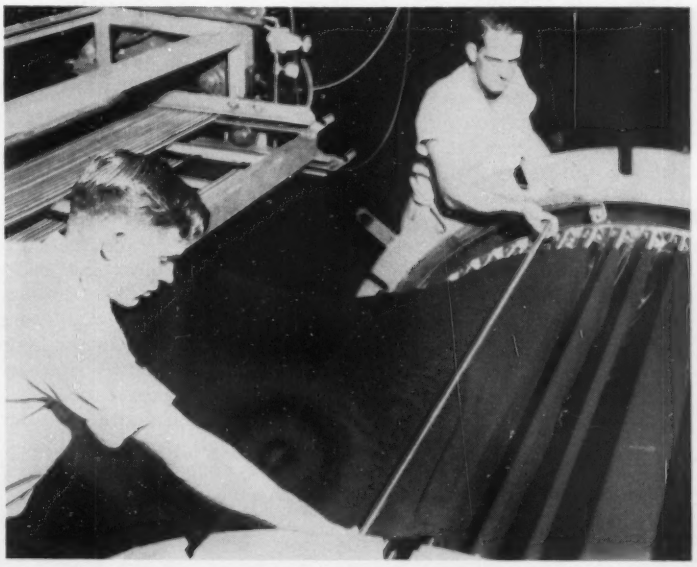
Fabric quality is also considerably better when cloth is dyed in the Barotor. The fact that no carrier is used is evident by the absence of any undesirable reaction of the fiber.

Shadiness, streaks, rope marks, and spotty dyeing previously experienced were expensive to redye. Now such defects are absent from the work. On Dacron, certain types of yarn defects do not show up so readily and are more easily covered on Barotor-dyed fabrics, according to experience in this mill.

Another important advantage lies in the fact that the machine uses about one third of the amount of water used in open dye becks in this plant. Less steam is required to heat the liquor in the pressure vessel; only 15 psi at 250 F operates the machine on a 4-hour dyeing cycle.

There are two machines in operation in this plant, and no maintenance has been necessary, except for an occasional replacement of gasket or seal on the door. Bearings on the main shaft are lubricated once each week, and the

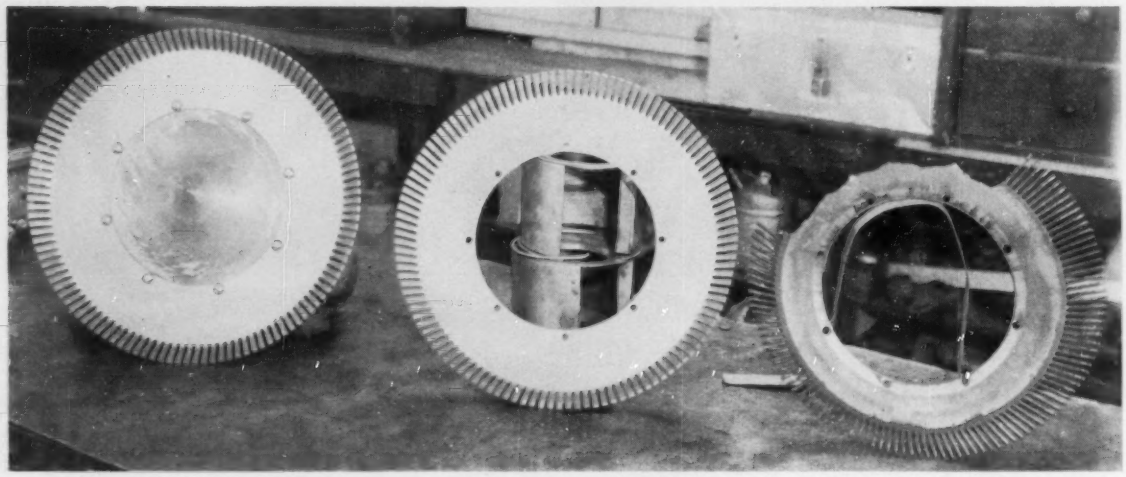
LOADING is done by hand, requires meticulous care.



wheels on the track are also greased weekly.

Loading and unloading require meticulous care, and a certain amount of training of operatives is desirable. Two men load the machine, which requires no further attention until the first sample patch is taken two hours later. If the sample proves satisfactory, nothing needs to be done until the cycle is concluded for unloading the machine. If the sample patch is unsatisfactory, the operative must prepare some makeup liquor to bring the fabric up to the desired shade.

Case 8



FINISHED REPAIR ASSEMBLY appears at left. Stainless steel replacement plate with flange slotted on gear cutter is in center. Broken brass part appears at right.

Economical Repair for Air Conditioning Spray Wheels

THE COST of maintaining spray wheels on 5-hp motors equipped with double extension shafts was reduced notably on air conditioning equipment in use at Gastonia Combed Yarn Corp., Gastonia, N. C. On this system there is one spray wheel on each end of the electric motor shaft.

Each of the brass spray wheels cost $52.00 when replacements were purchased; however, the machine shop effected the saving by making the spray wheels from stainless steel plates and cutting slots in the outer edge of the plate to serve as the water breaking surface (see accompanying illustrations). The slots were cut on a Brown and Sharpe gear cutter, and the cost of making the new spray wheels in the machine shop is $20.00, including labor and material.

The wheels turn at 1800 rpm, and each wheel diverts about 150 gallons of water per minute. The teeth or slots on the brass wheels broke from vibration and fatigue after about 5-6 years of service. In this plant there are about 70 of these spray wheels operating around the clock every day. So far about five wheels have been replaced, with an appreciable saving, and satisfactory service is evident from the shop-made parts, according to Jack Willcox, master mechanic.

Case 9

New Bleaching Stabilizer Improves Quality and Reduces Processing Costs

IMPROVED quality of work and lower processing costs are being reported by bleacheries using Sunolox in alkaline peroxide solutions for bleaching cellulosic materials. This new stabilizer is a water soluble, dry inorganic product developed by the Pennsylvania Salt Manufacturing Co.

During extensive field tests in which leading textile manufacturers in all parts of the country participated, Sunolox demonstrated superior bleaching action, eliminated serious dyeing difficulties, and provided substantial savings in time and water required in rinsing. Sunolox is effective in combination bleaching with chlorine and peroxide where ordinary stabilizers cannot be used. It leaves no insoluble residues on yarns or fabrics. Finished work retains its natural softness and original colors.

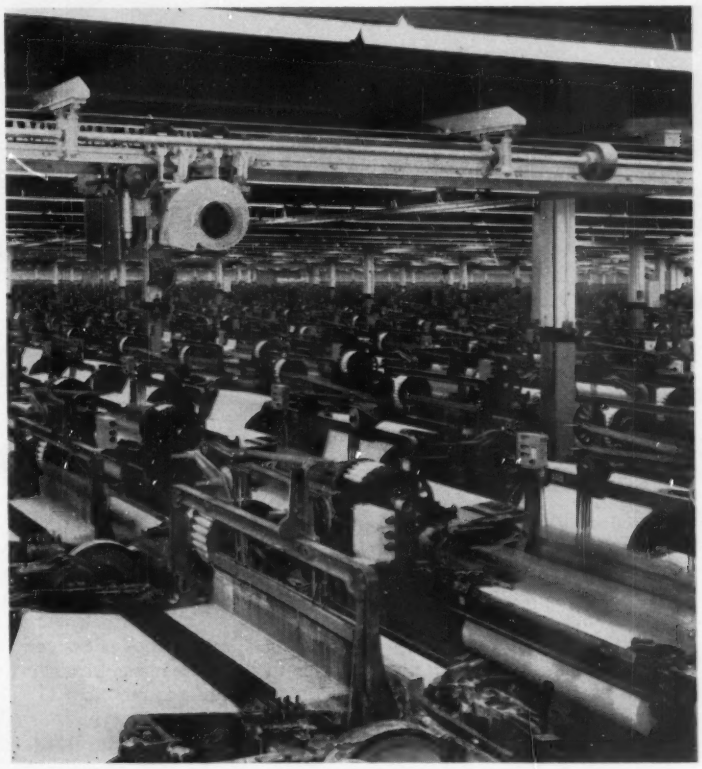
Sunolox may be used in package machines, kiers, dye becks, pads, jigs, and string dyeing machines as well as in rope and open width continuous bleaching ranges. It is harmless to the skin and delicate fibers and is non-corrosive.

Case 10

Crane-Mounted Overhead Loom Blowers And Low Relative Humidity Cut Cleaning

A CRANE-MOUNTED loom blower is doing an excellent job keeping looms lint free in one modern southern mill. According to the mill manager, 65% relative humidity is maintained in this weave room, and the device works well. This plant will continue with plans to fully equip the entire weaving area with the overhead blowers, supplied by American Monorail Company.

The mill manager explained that the low relative humidity makes the lint easier to blow off since it is drier. Also, there is less shedding which makes less lint to be cleaned from the looms. Moisture also loosens size, and since less moisture is maintained in the weave room, there is less size loosened to fall on the loom and surrounding area.



LOW RELATIVE HUMIDITY and crane-mounted overhead loom blowers combine to reduce cleaning operations in the weave room of this southern mill.

The warps contain 8 per cent moisture as they come from the slasher room. This helps permit running lower relative humidity in the weave room. Pearl starch is used on 80 x 80 construction, and the mill manager stated that his mill uses the normal amount of size on warps.

This mill spokesman readily stated that he would be likely to have less loom stops if 80% relative humidity were maintained; however, the additional cleanliness and reduction in cleaning operations makes the combination now in use in this plant both feasible and desirable. Also, employee morale is improved as a result of the cleanliness attained by the combination of traveling overhead loom blowers and low relative humidity.

Emphasis was placed on the fact that full cooperation from top management is necessary to secure results in adopting the combination of low relative humidity and crane-mounted overhead loom blowers.

Case 11

Gold-Color Finish for Roving Frame Flyers Paid for Itself

DEFINITE IMPROVEMENT in quality because of the lack of chokes in the hollow leg and on the presser foot of the 10″ x 5″ roving frame flyers has been the experience at American Thread Company's Dalton, Ga., plant since a gold-colored finish was applied to these flyers when they were reconditioned several months ago by Ideal Machine Shops, Inc.

In the opinion of J. D. King, plant superintendent, and F. H. Howard, card room overseer, the new finish, called "Goldflyer," has already paid for itself.

Filling all pores in the metal from which the flyers are made and also the crevices created by bending the hollow portion, the finish forms a smooth-as-glass surface which stops all hanging up of fibers and choking up of legs. As a result, it eliminates the slubs and doublings which come from choked legs.

The finish is baked on at high temperatures and is guaranteed never to flake off or to wear to rough surfaces. It is a non-conductor and is static eliminating. Humidity does not affect the finish either.

At this mill where 1.25 hank roving is made from 90-grain sliver on frames which doff every hour, it is

the practice to stop the frames every 30 minutes (middle of the doff) to pick the flyers, and also to pick them again at the doff. Both Mr. King and Mr. Howard believe that it may be possible to eliminate flyer picking at the middle of the doff because of the good results obtained with this new finish.

Case 12

Raw Stock Dryer Does Better Job and More Work at Lower Cost

MANETTA Mills, Lando, S. C., installed a raw stock dryer and a rotary type feeder and squeeze roll in April, 1954. Results with this new drying equipment have proved more than satisfactory, according to Harry Heath, superintendent at Manetta. The equipment was supplied by C. G. Sargent's Sons Corp., and the cost is scheduled to be amortized in about 5 years.

This machinery does a better job of drying by introducing air currents to the stock in larger volume and at higher temperatures than the old machine could handle. Quality has been improved by obtaining more uniform drying which in turn helps in making better picker laps and consequently more even yarn.

The new raw stock drying equipment handles 1,000 pounds of stock per hour at present and is not operated at full capacity. The new equipment is operated two shifts a day, five days a week, and production has increased 63 per cent, despite a reduction in the operating schedule. Costs have been reduced considerably by saving labor in addition to the higher production rate. Also, the larger production capacity of the new dryer permits a margin of safety for further increase in mill output.

The old drying equipment was operated seven days a week, three shifts each day. Two centrifugal extractors for raw stock were used to feed an old-model Sargent hot air dryer. This old equipment handled 350 pounds per hour.

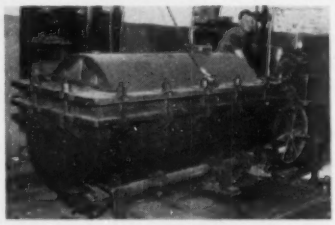
A 48-inch rotary type wet feeder now delivers the dyed raw stock to a 50-inch Sargent No. 45 pneumatic squeezer. The wet feeder is equipped with a 2-hp motor on feed roll and 3-hp motor on squeeze roll. A No. 6 Sturtevant stock fan and drive delivers the stock from the squeezer to an 8-ft rotary feed for the dryer.

The eight-section single-apron dryer has a "blow-up" section for tumbling the stock and is equipped with a perforated steel apron. A 5-hp motor drives the feeder.

Heating coils are mounted above the conveyor apron, and air circulates down through the heater coils and through the stock. A 10-hp motor is used in the "blow-up" section.

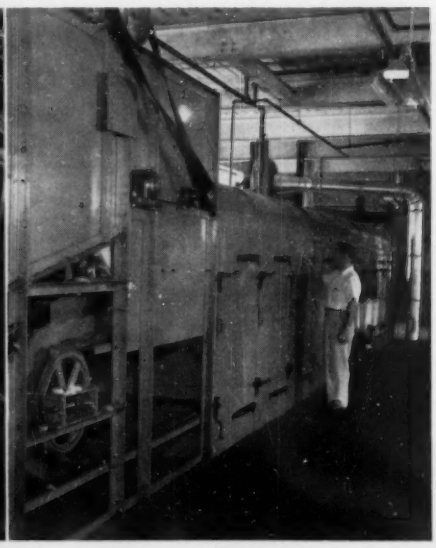
Each of the eight sections is served by a fan driven from a 3-hp motor. Roller bearings are used throughout the equipment, and a total of 46 hp is adapted to operate the installation.

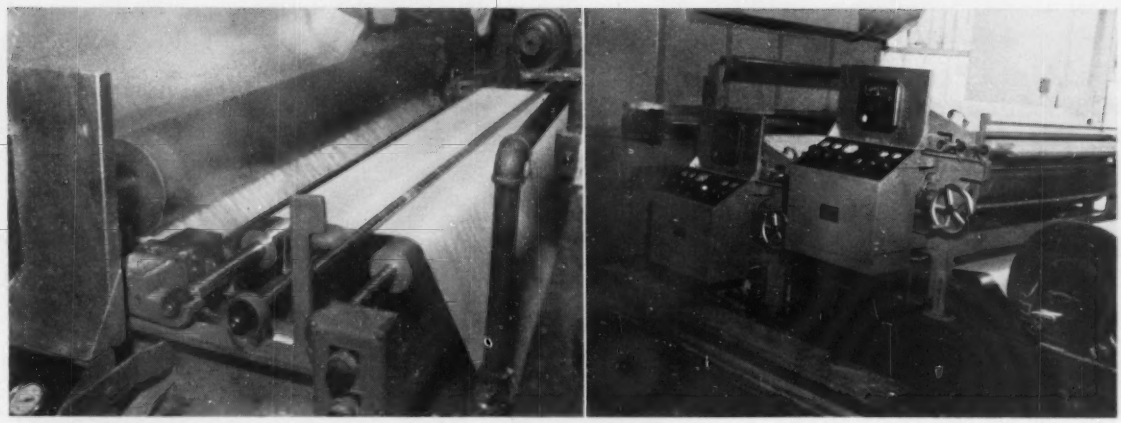
Two air-operated recording type temperature controls with steam control valves and air filters maintain even temperature in the drying sections.



NEW PACKAGE DYEING machine was installed at Manetta to enlarge existing dyeing capacity.

PNEUMATIC SQUEEZER (left) for wet raw stock feeds fan which delivers stock to dryer oven. Heating coils (right) are mounted above conveyor apron, and air circulates down through coils and through stock.





COVER of size box is easily raised to allow access to machine (left). Right: control panels are visible in this mill installation photo of two size applicators in tandem. Size boxes are electrically heated to prevent chilled size.

Case 13

Size Applicator Promotes More Efficient Slashing, Better Weaving

BOTH slashers at the Norris Cotton Mills, Cateechee, S. C., are now equipped with Griffin Size Applicators. These machines are operating behind conventional two-cylinder drying sections on warps which average about 3200 ends of single 30s cotton yarn. The Size Applicators were installed during May, 1954.

These machines incorporate a hinged cover over the entire size pan, which eliminates the need for an exhaust hood and fan over the machine. The cover is easily raised to allow access to the interior of the machine. It keeps floating fibers out of the size and retains heat so that very little steam is required to maintain size temperature.

Two rubber covered squeeze rolls, both pneumatically loaded, are employed against one bottom stainless steel squeeze roll. The size pan is insulated and size level controls and a complete instrument panel are built into the machine as standard equipment.

The first pneumatic squeeze roll is mounted off-center on the bottom stainless steel roll and it removes all excess size as the sheet comes up from the immersion roll. The second pneumatic squeeze roll is mounted on-center and dresses the yarn before drying. Operating volume in the size pan is only 20 gallons.

At Norris Cotton Mills, the drying capacity of each slasher was increased approximately 35 per cent to 40 per cent with the installation of the new applicators. This increase is attributed to even application of the size over all warp ends and to the elimination of tape formations within the sheet.

An even greater benefit is an approximate 2 per cent increase in weaving efficiency. This, too, is attributed to the even sizing and elimination of tapes and to the fact that size viscosity in these new applicators is always constant and approximately equal to viscosity in the storage kettle. This is true because of the insulated pan, the sealing effects of the cover, and the small operating volume of size. Fresh size flows into the pan almost constantly.

The normal expected life of rubber rolls in this machine is two years or more. Norris Cotton Mills is realizing a considerable savings from not purchasing slasher cloth to cover their squeeze rolls. Too, they are dumping 60 per cent less size on week-ends than they were previously. These savings, together with the increased weaving efficiency, offer almost a complete return on the investment in one year.

The installation of these Size Applicators was made by Ira L. Griffin & Sons, Charlotte, N. C.

Case 14

Card Doffer Fitted With Sealed Ball Bearings at 50 Per Cent Cost Saving

A SOUTHERN manufacturer of cotton yarns found that new bearings were needed on the doffers of some of the H & B cards. On checking, the mill found that the cost would be $52 per card.

The mill decided to install sealed ball bearings, and did so at a cost of $26 per card, or half the cost of plain bearings. The bearings have now been in operation for a year, and are entirely satisfactory.

Later, the same type bearings were installed on some Lowell cards, with an even greater saving, although the installation procedure is slightly more difficult than on the H & B cards.

In both cases the sealed ball bearings were supplied by Precision Gear and Machine Co., Charlotte, N. C.

Case 15

Set Mark Preventer Cuts Seconds in Weaving Twills

ONE South Carolina mill installed two set mark preventers (made by Dill Loom Adapters, Inc., Greenville, S. C.) in July of 1953. XD looms were making 49″ twills of spun rayon, and set marks were a major problem in maintaining quality in this plant. Set marks cause 90 per cent of the seconds.

After three months of successful trials, additional set mark preventers were installed. These were run with good results, and seconds due to set marks were reduced from the former level of 15 per cent to the present level of 3 per cent. These figures apply to production of twill weaves including 2 x 1, 3 x 2, and 4 x 1 constructions.

Another advantage of this device is that warp breaks are reduced by the action of the mechanism which nearly levels the harnesses momentarily on each pick, thereby removing much strain from the lower portion of the shed. A 10-15 per cent reduction in warp breaks has been effected by the attachment.

The device at present operates only on dobby looms. Usually the twill is woven face down when this attachment is used. A similar device for use on cam looms is under development.

The investment in the set mark preventer was amortized in less than six months on 4 x 1 and 2 x 1 twills (sheen gabardine). The attachment helps on all other twills and cuts seconds at least 60 per cent on any twill this plant has run.

The device is easy to install (takes about 30 minutes), and self-aligning bearings (see accompanying illustration) assure minimum friction. Maintenance has been negligible after 1½ years of operation in this plant.

SELF-ALIGNING BEARINGS (left arrow) of set-mark preventer assure minimum friction. Arrow on right points to harness leveling lever.

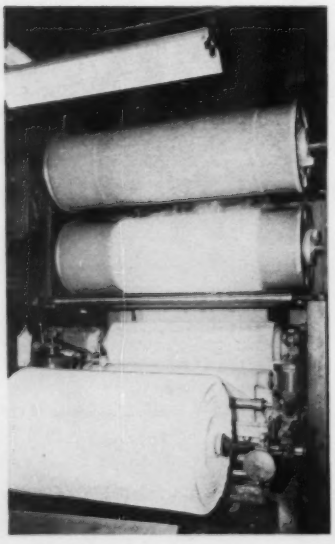
Case 16

Tenter Production Increased 25% With Teflon-Coated Pre-dryer Cans

HERZL Textile Dyers Inc., Brooklyn, N. Y., has increased production 25 per cent on each of five tenter frames since the cans on the pre-drying units were coated with Teflon by General Plastics Corp., Paterson, N. J. This increase has resulted from a reduction in down time formerly necessary to clean the machines, primarily the tenter clips. With the application of Teflon on the dry cans most of the excess finish is removed from the material before it goes on the tenter clips, thus reducing the buildup on the clips.

Through the use of Teflon, 60 per cent of the moisture is taken out of the cloth by the cans, allowing more curing in the tenter frame housing than was possible before.

Before the application of Teflon



TEFLON-COATED CANS on pre-drying unit at Herzl Textile Dyers. Top can, not in use when photo was taken, shows only small traces of finishing material after many months of use.

the down time on each unit was more than one day a week for cleaning, while today a routine cleaning of a much shorter time is given to each unit once a month. The Teflon coating also imparts a smoother, more even finish to the material, since the cans themselves are free of buildup.

Teflon can also be applied to slashers, dry cans, rollers, tenter pins and many other parts that cause trouble through buildups of sizing material, dyestuffs, and lint.

Case 17

High-Grade Steel Alloy Rings Have Long Life

CLINTON Cotton Mills, Clinton, S. C., now have a total of 81,616 Draper Mirror Finish spinning rings in service. One installation of 37,296 rings has been in continuous operation since 1937. During most of this time the rings have been running for 144 hours a week, and are still running well.

The rings installed in 1937 are Draper #1 flange DA straight web 1 7/16" rings running on filling. Of these, only 14,872 have been turned. Average yarn number spun is 40s, with a range of 36s to 47s. Spindle speed is 8,300 to 8,750 rpm, 8¾-inch bobbin.

The long, trouble-free service given by these rings is attributed to the high-grade, quality controlled steel alloy used in them, to the Draper Mirror Finish, and to the breaking-in and care given the rings by the mill.

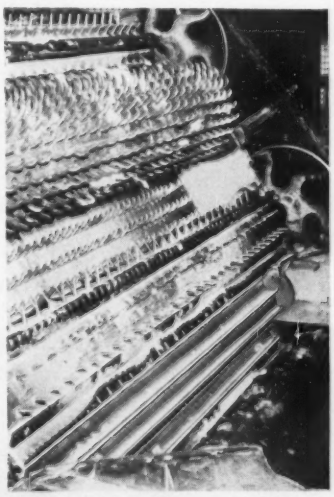
Case 18

No More Profits Chiseled Away In Picker Room

THE FELTERS Co. was having trouble in the picker room of their Johnson City, N. Y., plant. Cockspur feed rolls delivering raw stock to the cylinder of a fearnaught picker periodically jammed. The fibers had a tendency to lodge between the teeth, packing down as they accumulated. This condition interfered with uniform feeding and picking and, at the same time, choked the stock being brought up on the feed apron.

According to Norman Upham, superintendent of picking, the picker had to be stopped frequently and the packed stock actually chisled away from between the teeth. Naturally, lost production in the picker room played havoc with the card room.

The problem was discussed with a Rodney Hunt roll engineer. In conjunction with the Felters Co., Rodney Hunt Machine Co. developed a new kind of feed roll—a solid steel eight-bar roll. It was so designed that two such rolls would inter-mesh; and when driven, there would always be ⅛" clearance between and around the bars.



STEEL feed rolls on fearnaught picker replace old rolls formerly used. The new rolls require only occasional cleaning, and have eliminated jamming of feed to picker.

These rolls solved the problem. The new rolls continuously feed the stock, and in addition deliver stock more uniformly to the picker. They require only occasional cleaning. The new steel rolls have a considerably longer service life than that of the old rolls they replaced; relagging is completely eliminated.

As a further aid to good picking, lubrication of the stock on the apron by means of the sprayers has been discontinued. The Felters Co. found that the emulsion was a factor in stock clogging picker teeth. Now, emulsion is mist sprayed onto the stock in the blower line following the picker.

Case 19

Finish Prevents Corrosion of Air Conditioning Equipment

A RUBBER base paint called Rubalt RA was applied to air conditioning equipment at Judson Mills, Greenville, S. C., to provide a rust-resistant finish for air conditioning equipment. This method of servicing the equipment employs more labor but results in less overall cost.

The original finish on the equipment was attacked by moisture and was ruined quickly. Something had to be done to save the equipment, and the black rubber base finish was selected for the job. The plant engineer, W. T. Watson, found that the cost of cleaning and applying a protective finish on the average fan of 80,000 to 100,000 cfm capacity (see accompanying illustration) was $1400 to $1500 when the job was done on a contract basis by a commercial firm. Upon careful study it was found that the job could be done in the mill for $200 to $300, which represented a considerable saving.

After acquiring a supply of the black rubber base finish from Alfred G. Hague & Co., of New York, a schedule was established to clean and refinish the fans every three years. The finish is applied to all supplementary equipment that is not made of stainless steel. Results have been gratifying, and

savings were realized as expected.

This mill found that a nearby plant had to discard some of its air conditioning equipment after only 2-3 years of service because no protective finish was applied, and corrosion ruined the equipment.

Case 20

Maintenance Costs Are Low with Variable Speed Hydraulic Transmissions

FOR MORE than five years Abbeville (S.C.) Mills Corp. has been using variable speed hydraulic transmissions supplied by Vickers Inc. as the driving mechanism for various pieces of equipment in its finishing department.

Most of these units are compact integral hydraulic transmissions or "package" units with axial-type hydraulic pump, hydraulic motor, valves, and control mechanism in one housing. Both the pump and the motor are variable displacement types that provide wide range, stepless, smooth speed adjustment.

These variable speed hydraulic transmissions have proved their dependability in performance and have also compiled a record free of maintenance cost other than the cost of periodic oil changes as recommended by the manufacturer.

The units have been run at creep speeds for long periods of time without overheating problems being encountered. Their feature of generating only the power needed for a given demand has proven to be most beneficial as far as efficiency is concerned.

Machines which have been equipped with Vickers' drives include a Morrison 10-ton padder, synchronized with a tenter by a mechanical signal from a dancer roll; a 120-ft Van Vlaanderen tenter; and a Tenco dye beck, which is driven by a split-type hydraulic transmission.

Case 21

Modern Methods Speed Materials Handling at Springs Cotton Mills

THE PRACTICAL application of modern materials handling machines has enabled The Springs Cotton Mills to obtain cost-cutting advantages throughout their South Carolina plants. The Gayle Plant at Chester is typical of the steps taken by the company to obtain increased production through modern materials handling methods.

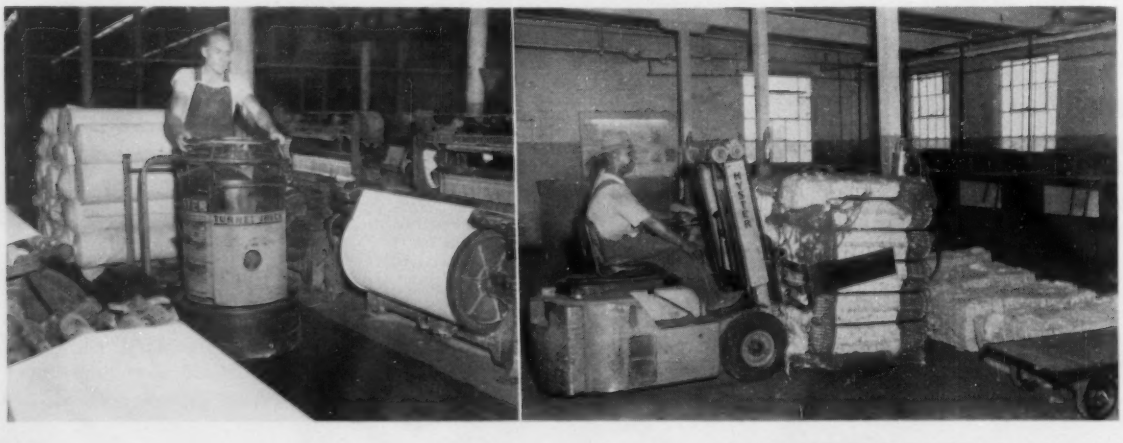
Springs' operation at Chester posed several problems to the Hyster Co., whose engineers designed the installation. Doorway clearances, ceiling heights, and restricted aisles dictated the application of equipment specifically designed to operate under exacting conditions.

For example, the Hyster Turretug is employed between the weaving and cloth rooms in the transporting of rolls of cloth. These trailers, when loaded, will gross about 3,500 pounds. Loaded trailers formerly required several strong men to push them, and were always somewhat of a hazard from a control standpoint because of the danger of bumping and possibly damaging the looms.

Its high maneuverability dictated the use of the Turretug. Steering is done through the drive wheel — the entire Turret power unit can be completely rotated in either direction.

Hyster Turret Trucks team up at the Gayle plant with the Hyster QN-20, 2,000-pound capacity fork lift truck. Together, these units are performing a variety of tasks such as unloading of cotton bales and bales of waste, storing of starch, and warehousing of the finished products and rolls of cloth.

HIGH MANEUVERABILITY is feature of Turretug (left). Cotton bales are handled at Springs with 2,000-lb capacity fork lift truck at right.



Case 22

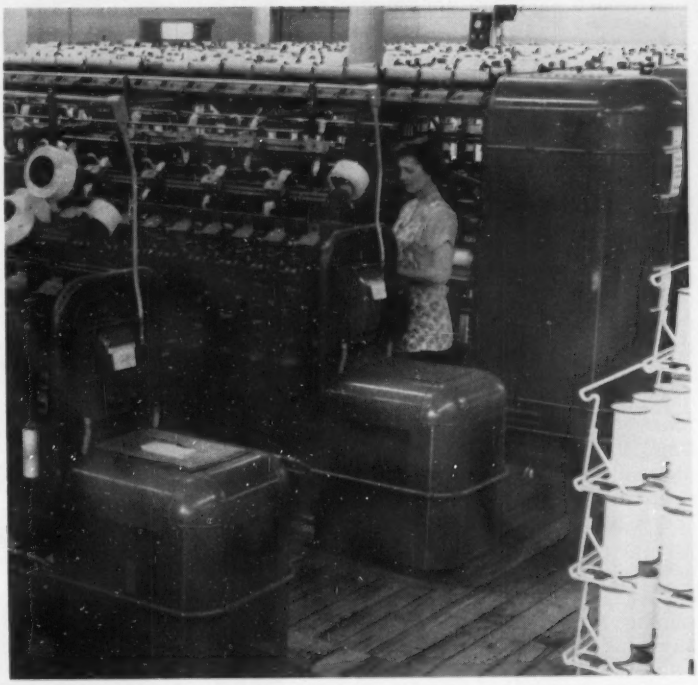
Using Dacron? Here's How to Eliminate Redrawing and Reduce Filament Breakage

ALMARDON Mills, Lonsdale, R. I., weaves fine quality piques and lenos from Dacron. The yarn for these fabrics is supplied with zero twist, but requires a high final twist.

The mill was redrawing 70-denier Dacron from cheeses to bobbins, and then inserting 20 tpi of twist on 12-oz package uptwisters. Twisting speed was low, filaments opened, and breakage was high. Flyers had to be used, and the abrasive character of Dacron made it necessary to replace flyers at every doff. Rewinding was required if relaxed yarn was needed.

The mill recently installed Universal Model 10 ring twisters and Unirail headless package uptwisters. Two turns of twist are now inserted directly from cheeses without redrawing. The uptwisters put in the remaining 18 tpi at 14,000 rpm, without flyers.

The uptwister produces 1½-lb packages, and controlled relaxation of the yarn is possible without rewinding. Filament breakage has been practically eliminated.



DACRON YARN from cheeses is given two turns of twist on ring twisters and then an additional 18 tpi are inserted on uptwisters at 14,000 rpm. Redrawing is eliminated at this mill.

Case 23

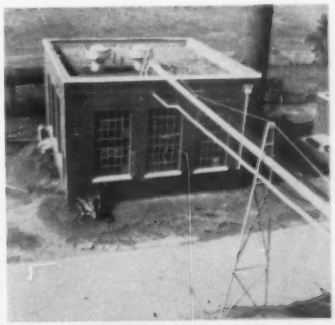
Overhead Steam Main Installation Eliminates Water Damage

THE ORIGINAL steam main installation from boiler house to mill building at West Boylston Mfg. Co. of Ala., Montgomery, Ala., was through an underground duct of terracotta with underdrain. During heavy rains this underground main became submerged and the insulation got water-soaked, causing heavy loss.

Since the steam line ran under a railroad track and a 16-ft-wide concrete pavement, the mill decided to abandon the old line and substitute with a new overhead installation.

Maintenance personnel erected an A-frame support, fabricated with 4″ channels and 1½″ angles by electric welding, on a heavy concrete pier midway between mill building and boiler house. The concrete pier for the A-frame was made extra heavy because of its location near the street pavement, to prevent damage from passing vehicles.

A short A-frame was mounted on the boiler house, the 5″ pipe and long radius ell were purchased with beveled edges for electric welding. ⅝″ galvanized stranded messenger cable was anchored to the wall of the building and the roof of the boiler house, over the top of the A-frame and through the pipe hangers, with rollers on the cable to allow expansion movement.



A-FRAME which supports steam main is midway between mill and boiler house.

This line was insulated with 1″ magnesia pipe covering and covered with an aluminum jacket.

Later additions hung from this same support were a 1″ galvanized air line, and a 1½″ condensate return line that formerly ran underground.

Case 24

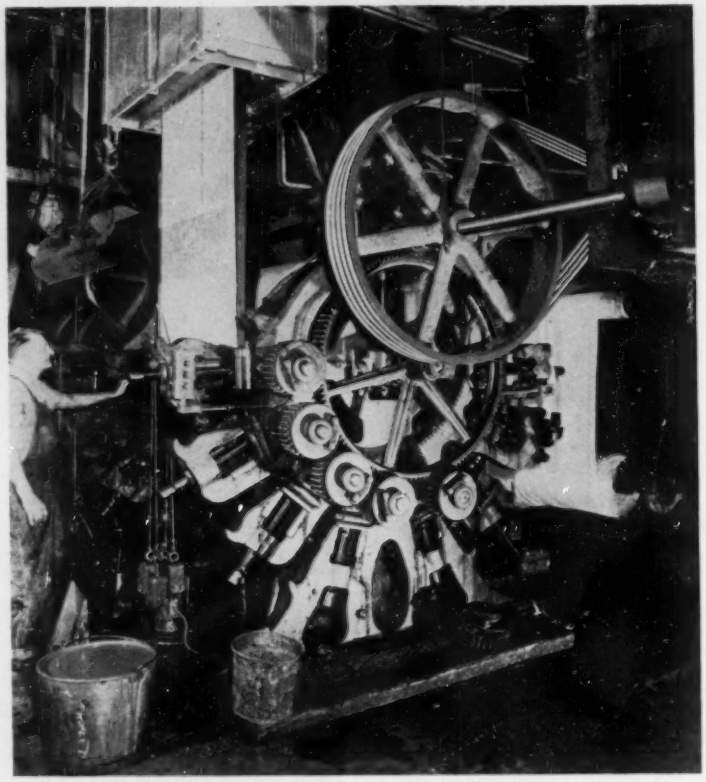
Vibration Eliminated By V-Belt Drive on Printing Machine

AN EIGHT-COLOR fabric printing machine at the Housatonic Printing and Dyeing Company, Derby, Connecticut, was giving trouble with excessive vibration. Blurred prints resulted from the difficulty. The vibration was found to come from a chain drive assembly which frequently jarred the color plates out of register, thereby producing blurred patterns.

Sometimes many yards of costly fabric were ruined; furthermore, the vibration frequently damaged the drive parts and caused excessive wear.

Fred Rinaldi, factory maintenance engineer, discussed the vibration absorbing advantages of Gates Vulco Ropes with a distributor in nearby Danbury, Connecticut. As a result of this investigation, Mr. Rinaldi decided to convert the fabric printing machine to a Vulco Rope drive.

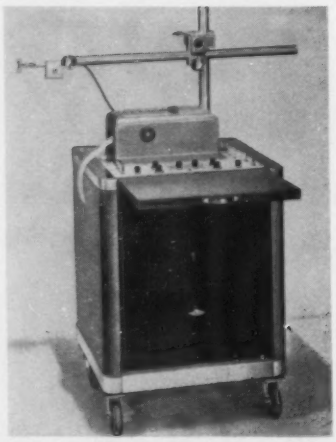
The Gates V-Belt drive has been running for several years without any appreciable maintenance. The drive so effectively ended the vibration that was causing fabric spoilage that six other similar machines were converted to the same drive.



BLURRED PRINTS on this machine were caused by vibration from chain drive. V-belt drive shown eliminated vibration.

Case 25

Tension Analyzer Localizes Trouble In Nylon Plant



TENSION ANALYZER helped nylon producer to track down cause of knitter complaints of excessive press-offs.

CHEMSTRAND Corporation, Pensacola, Florida, has had a Brush Electronics Tension Analyzer in operation for several months. This instrument has solved a serious problem created by improperly wound knitting yarns, which caused circular knitters to complain of excessive press-offs due to uneven tension.

A Tension Analyzer was used in the search to find the source of trouble, and the difficulty was thereby localized at the winding operation. Corrective measures were immediately undertaken to eliminate the cause of the uneven tension.

Before the Analyzer was available there was no easy way to detect the fault. As a result of the use of this instrument, many customers were retained, and the cost in this instance was amortized overnight by preventing loss of business which would have been attributable to the uneven tension.

The Tension Analyzer measured and recorded actual tension levels and tension variations in the nylon while it was being processed. Mobility of the testing equipment permitted easy changes in testing different processes in various locations in the plant.

The direct writing oscillograph used with the Tension Analyzer made a written record of tension measurement variations at production speeds, and this information was used to localize the difficulty in the winding operation.

Case 26

Clearer Cleaning Machine Saves $1500 Per Year

HENDERSON Cotton Mills, Henderson, N. C., installed a cleaner for revolving clearers more than a year ago. Savings permitted by this cleaner amount to $1500 a year for labor alone.

The machine is operated by an electric motor and is particularly adapted to removing pieces of roving wrapped around the back underclearer. It is used to clean all revolving clearers in this mill.

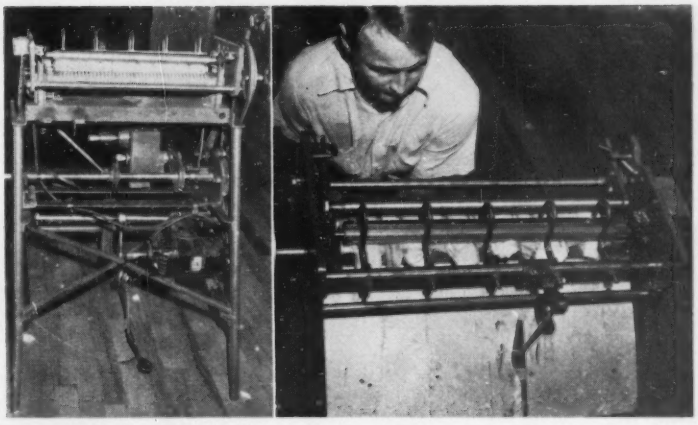
Although no records were kept, a conservative estimate indicates that only ¼ to ⅓ the amount of time and labor is needed for cleaning underclearers as compared to hand cleaning operations.

No skill is required to operate the device, which operates on 110-volt current. The cleaning mechanism is similar to a card doffer comb. The device occupies a space about 3 feet high by 40 inches long by 30 inches wide.

A prototype is in use at Henderson, but a more refined version is being produced for sale by Sykes Foundry and Machine Co., Burlington, N. C.

Each frame in this plant has 252 spindles (one back underclearer to each six spindles on long draft Whitin spinning), and three operatives can clean 16-24 frames in 8 hours. One person cleans rolls on the machine and two operatives remove and replace rolls. When the cleaning was done by hand, four persons could clean 6 frames in 8 hours.

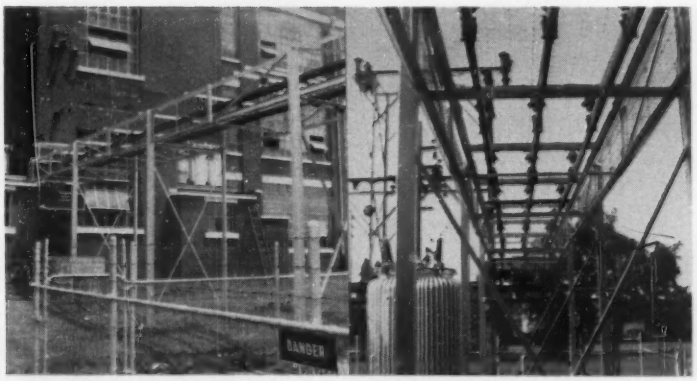
In this mill, underclearers are cleaned every 6-8 months. Formerly, 54 days each year were required to clean by hand. Now, cleaning requires only 18 days per year by using the clearer cleaner. Cost of the machine was amortized in less than a year.



CLEARER CLEANER is particularly adapted to removing pieces of roving wrapped around the back underclearer. It operates on a principle similar to that of the card doffer comb.

Case 27

Overhead Buss Bars Eliminate Power Cable Failures



STRUCTURE to support buss bars was fabricated by maintenance personnel at the mill.

THE ORIGINAL feeder installation at West Boylston Mfg. Co. of Ala., Montgomery, Ala. from the power company's outdoor transformer station 440-volt buss to the feeder breaker switch room on the second floor of the mill building (about 52 ft) consisted of ten 600,000-MCM lead-covered three-conductor cables. These cables ran from the buss to underground cable vaults in conduit, and then through fiber ducts underground to the basement of the mill building.

After ten years of satisfactory operation, the mill began to experience cable failures. Since the cables were nested together in the vault, a fault in one cable would cause ruptures in adjoining cables. It was realized that a serious cable rupture could cause a plant shutdown of considerable duration.

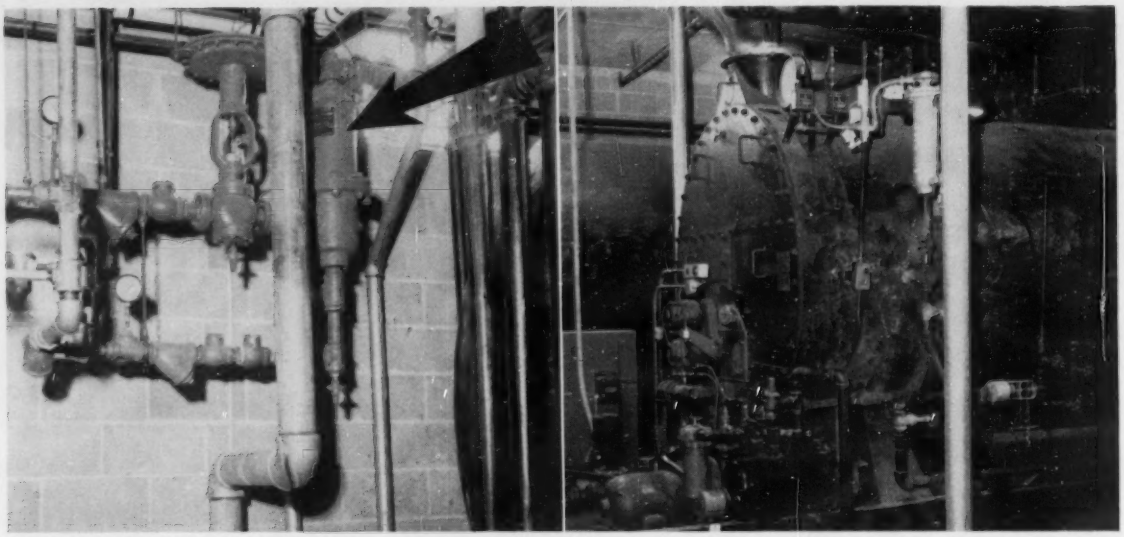
The mill compared the cost of cable replacement (with chances of repeat cable failures) with the cost of an overhead structure supporting ¼" x 4" hard drawn copper bars of equal carrying capacity. The latter plan was adopted.

After the material was assembled, maintenance personnel fabricated the structure with the

aid of a torch and electric welding machine. Only bolts used were for fastening insulators, buss and insulator clamps, and anchor bolts.

Change-over to the buss structure was made over the week end. Installation has offered satisfactory service with only routine maintenance painting.

Case 28



INSTANTANEOUS WATER HEATER has a capacity of 80 gpm through 140° rise. 3600-gallon tank is plastic lined and serves for hot water storage adjacent to the 150-hp B&W boiler.

Instantaneous Water Heating Equipment Cuts HP Requirements

SOVELCO Mills, Inc., Winston-Salem, N. C., was confronted with a problem in selecting the most suitable power plant equipment for dyeing and finishing operations.

The major load is to provide steam to heat water for the dye house; a 250-hp boiler was believed to be required for the job.

Study revealed, however, that boiler capacity could be saved if the shock load on the boiler were eliminated, and that water heating time could be reduced if the water were heated continually in a vented tank instead of directly in the dye machines. Consequently, a 150-hp boiler was found adequate for the job.

A Pick Instantaneous Water Heater, Model 6X 50-2, having a capacity of 80 gpm through 140° rise, was purchased and operates in conjunction with the 150-hp Babcock and Wilcox boiler.

The water level in the tank is governed by a float control and all water entering the tank is heated to the desired temperature by the Pick Instantaneous Heater, with steam as the heating medium.

The hot water tank acts as an accumulator for sufficient hot water for each cycle of operation. The water heating process is carried on throughout the entire day, instead of on a short term basis which would result in short peaks and excessive shock loads on the boiler. This method of heating water also eliminates the time required to heat the water in the dye machines by live steam.

Another advantage over the usual storage tank method is the fact that the water temperature does not drop as water is drawn. Also, the shock load on the boiler is less, and there is no need for an ASME inspected and insured pressure vessel with the usual high maintenance on such equipment.

Case 29

Quality Improved in Slashing With Synthetic Squeeze Rolls

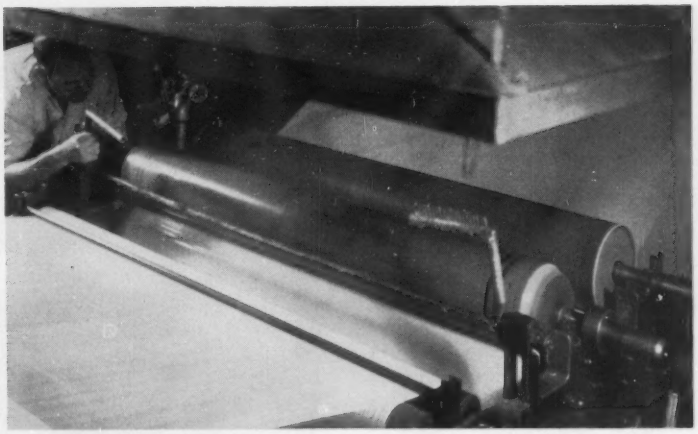
SYNTHETIC size rolls were installed on slashers in one North Carolina denim mill to solve the problem of lap marks and variation in size content of denim warps. With the application of the special rolls made of compounded rubber by Dayton Rubber Company, lap marks disappeared and size content remained nearly constant (within plus or minus 1 per cent).

Another advantage noted from use of the Dayco Thoro-Size slasher rolls was a reduction in the cost of re-covering rolls over a long period of time. The rolls may be easily buffed to obtain a true sur-

face after considerable use. The surface of the roll does not harden when the slasher is stopped.

This mill is well pleased with the advantages of the synthetic rolls and has installed them on all slashers. The rolls were found to be unaffected by oils and chemicals in the sizing compound. Cost of the rolls was amortized in less than a year.

Weekend problems were eliminated in that it is only necessary to rinse the roll off after removing leverage. Also, less trouble has been experienced with bearings on the bottom roll by eliminating bumps which formerly threw a sudden shock load on the bottom roll bearings.



SYNTHETIC RUBBER SQUEEZE ROLLS on this slasher have eliminated lap marks, and size content of warps is constant within ±1%

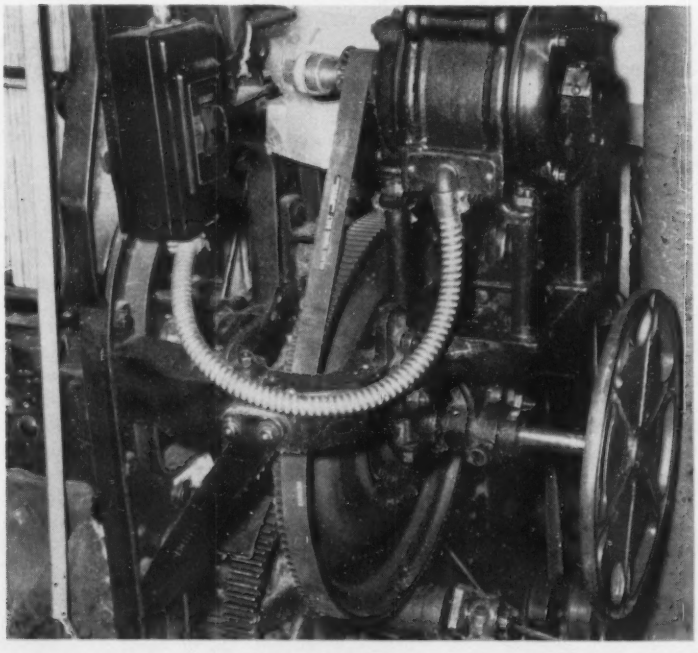
Case 30

Timing Belt Drive Eliminates Speed Loss on Narrow Fabric Looms

UNINTERRUPTED production, plus elimination of noise, lubrication problems, maintenance, and maintenance checks are the advantages derived by a Rhode Island narrow fabric weaver through conversion of his loom drives from V-belts to Gilmer "timing" belts.

This textile manufacturer estimates that the loom conversion paid for itself in approximately two months. The drives were converted over one year ago and company officials report that they are "extremely pleased" with the timing belt, a product of New York Belting & Packing Co.

TIMING BELT DRIVE was installed on this narrow-fabric loom by first facing off teeth on driven gear and then cutting standard timing belt teeth to take a stock timing belt.



The original drive for the narrow fabric loom was a gear type which was first changed to a V-belt drive and then to the timing belt drive. The teeth on the driven gear were faced off and standard timing belt teeth were cut to take a stock Gilmer timing belt. In this type loom, the timing belt runs constantly, being engaged through a clutch.

The timing belt absorbs the starting shock loads and permits a non-slip drive with no speed loss. When the Pawtucket company used gears it had the constant problem of shafts shearing because of the starting shock loads. The V-belt drives cushioned out the shock loads, but because of the constant starting and stopping, the belt stretched and eventually wore so that the pitch diameters changed, causing a loss of speed.

The speed loss was from 3 to 8 picks per minute, which is a loss of approximately 20 to 52 yards of tape on a 36-shuttle loom for an 8-hour day. Use of the timing belt drive has completely eliminated this speed loss and it no longer is necessary to check this factor.

Case 31

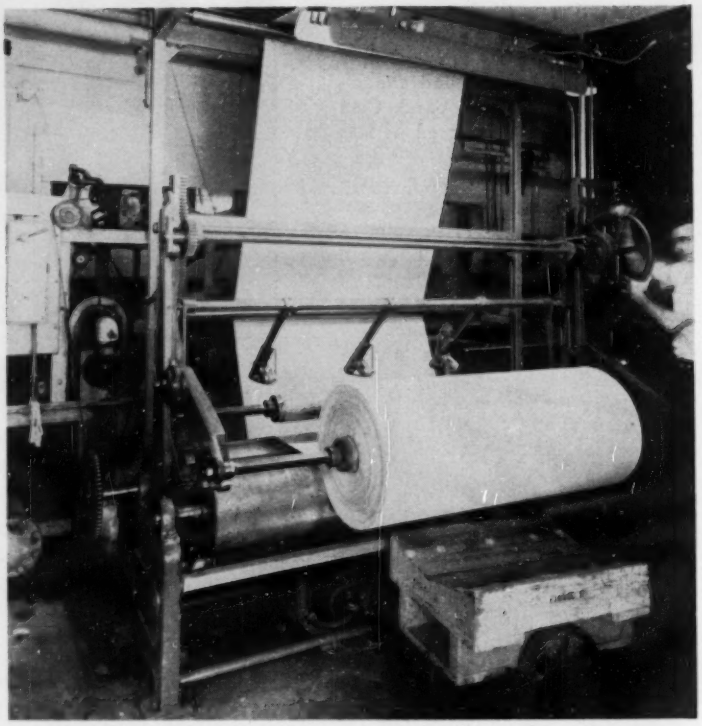
Rotary Cutter Winder Permits Continuous Operation of Finishing Range

FAIR Lawn Finishing Company, Fair Lawn, N. J., specialists in the dyeing of synthetic materials, are using an EMCO rotary cutter winder to wind and cut materials such as rayon, nylon, Dacron, and Orlon. The rotary cutter winder has enabled the company to put the finishing range on continuous operation. Previously, rolls were changed manually and there was an interval when no goods were running through the range.

When the material is about half wound on the roll, the operator turns the hand wheel and the roll is transferred from the back to the front drum, where it is placed in roller bearing arms for completion of wind. At this time, the operator places an empty shell in the back drum.

When the roll in process is completed the operator actuates the machine to make the cut — which is performed rapidly, cleanly, and with considerable accuracy, often right at the seam line. As soon as the cut is made, the operator pulls a lever which releases both journals of the spitz bar, allowing the completed roll to drop evenly onto the waiting dolly. At the same time the cut is made, the winder automatically starts the cut end on the new roll, and the process is repeated.

With the cutter winder in use, there is no interruption, no slowing down of the goods in process; there is no lifting by the operator to remove the finished roll onto the dolly. For manual operation, two batchers would be required, with a man working between them. This would involve more labor and would take up extra floor space.



ROTARY CUTTER WINDER at Fair Lawn Finishing Co. winds rayon suiting at 38 ypm without interruption in the process.

With the rotary cutters, the material is cut rather than torn off against a stationary blade. The cutters are gear driven, can cut soft or heavy material when the machine is running at a high or low speed, or when stationary. At no time does the operator come in contact with or come dangerously near the cutter.

The EMCO rotary cutter winder is manufactured by Eddystone Machinery Co., and is sold by H. W. Butterworth & Sons Co.

Case 32

Belt Stretcher Accurately Controlled By Electronics

PRECISION stretching of duck conveyor belts was accomplished by the custom construction of an electronically controlled 3-roll set machine at C. R. Daniels Inc., Daniels, Md.

The duck is either woven or sewn into several layers in widths up to 59 inches; in its off-loom state it is not suitable for wet finishing and use as belts, since the tendency to sag with weather changes makes a belt produced from such cloth a manufacturing nuisance. Further, if too much stretch is applied to the belting, there is a danger that the belt will contract when it is wet, with virtual ruin of the conveyor system a likelihood; understretching can cause loosening up of the belt.

The degree of stretch required to arrive at the proper conveyor belt conditions has been determined for the various types of belts made by the mill; with the cooperation of the Westinghouse Electric Corp. a machine was built with control possible to 100,000 pounds of pull between pairs of the 3 pairs of rolls. The overall stretch from feed to delivery of the machine can be accurately

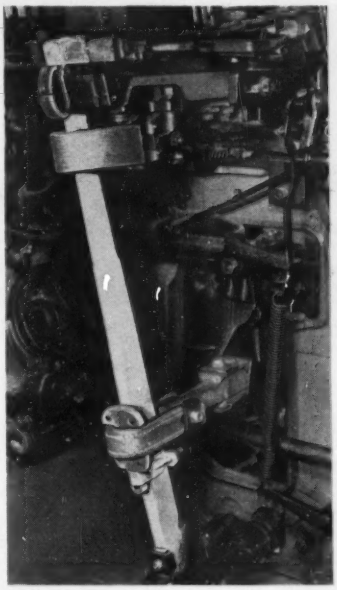
controlled to as little as 1/16 inch of stretch per foot of belting.

These controls plus wind-up of the stretched belt are electronically regulated. The controls include start-stop buttons, and a dial-type variable adjustment for stretch (ratio of delivery to feed).

Case 33

Special Check Straps Have Double Wear Life

A SOUTH Carolina mill with over 1500 looms wanted to increase check strap life and consequently lower strap costs. Rhoads Tannate special check straps were installed, and recent reports state that these straps average over 6000 loom hours as compared to less than 3000 loom hours for straps previously used. Records were kept on 40" E Model Draper looms operating three eight-hour shifts, six days a week, with an average speed of 165 picks per minute.



The reasons for this increased service life are said to be unique tannage and curry methods. These result in straps that are stronger, requiring relatively fewer adjustments, and just the right resilience for correct checking. In addition, the straps have a smooth satin-like finish that makes a better friction surface.

Case 34

Bunch Builder Cuts Waste in Weaving

A COTTON mill in Alabama has installed a new type of bunch builder on all of its filling spinning frames. Result is that less waste is made in weaving because the bunch builder can be quickly set for any bunch yardage needed, with no variation from doff to doff.

Piling of the bunch and slough-ing-off are also eliminated.

Made by the Talladega Foundry & Machine Company, the bunch builder can use a four- or eight-point disk cam and makes either the oval or flat bunch. It is automatically reset when the doffer pulls the frame down.

Maintenance is said to be negligible.

Case 35

Homogenized Size Gives Improved Results on Spun Rayon Warps

JACKSON Mills, Wellford, S. C., have been operating a 300-gallon-per-hour Manton - Gaulin homogenizer to prepare all of their warp sizing for the past two years. They have found that the homogenizing process offers improvements from a quality standpoint in addition to a marked reduction in sizing costs which allows the entire installation to be amortized within a very short time.

This plant manufactures quality spun rayon fabrics, and was able to substitute pearl corn starch for the British gum type formerly used. The mill gets the same pick-up as before, but with more uniform size from batch to batch, a smoother size that splits more easily at the lease rods, a more pliable yarn, reduction in seconds, elimination of hard size, and a slight increase in weaving efficiency.

The installation paid for itself in a short time because of the difference in starch costs alone, without considering the other benefits listed.

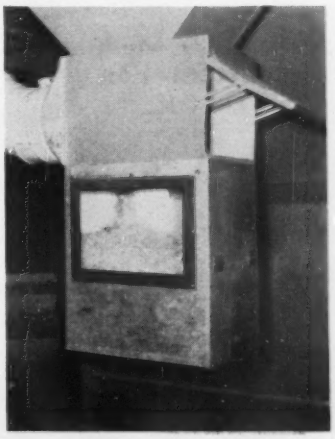
The only problem encountered was difficulty in maintaining constant pressure while pumping size through the homogenizer, but this was solved with a constant-pressure regulator [see TEXTILE INDUSTRIES for Sept., 1954, pp. 148-150.]

Case 36

Grid Bars Remove Extra Trash at Centrif-Air Machine

WEST BOYLSTON Mfg. Co. of Ala., Montgomery, Ala., has been able to remove from 10 to 15 per cent more trash with its Centrif-Air cleaners, by installing a section of grid bars in the bottom of the air intake box connected to the duct which takes the cotton

GRID BAR section installed at bottom of air intake box to condenser duct has permitted this mill to increase trash removal at Centrif-Air machine by 10 to 15 per cent.

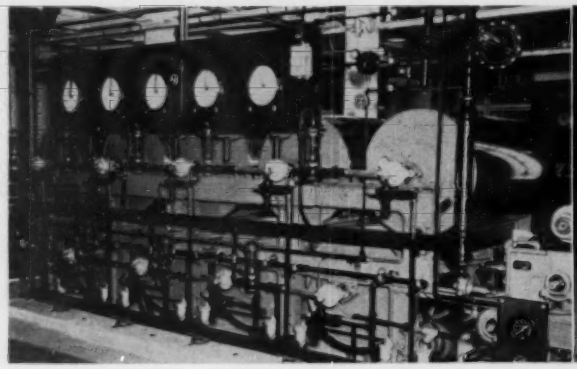


to the condensers.

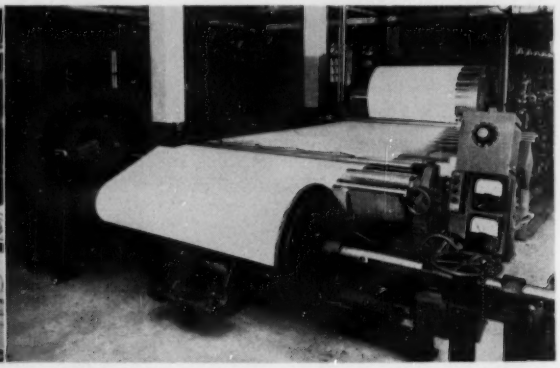
The grid section was inclosed underneath, to provide a dead air space under the grids and for a container for the motes and trash. The container has a window and a cleanout door.

The grid section was made from 1/8" by 1" flat bars, spaced 3/8" apart, and with the openings sloping slightly toward the travel of the stock.

Case 37



CYLINDERS are equipped with Taylor individual temperature controls.



STRETCH indicator with double bearing traversing tailstock.

Minimum Drive Maintenance with Multi-Cylinder Slasher

A PROGRESSIVE southern textile mill has installed a multi-cylinder slasher manufactured by the West Point Foundry & Machine Co., and is using it to size filament yarns.

The slasher has nine 30-inch stainless steel cylinders and operates at 35 psi steam pressure. The mill has found that this relatively high pressure makes possible more rapid heat recovery than can be obtained with the 15-lb pressure common with many slasher cylinders.

The roller chain and sprocket drive to each cylinder of the slasher is an especially desirable feature. The drive has given no maintenance problems since the slasher was installed.

The installation at this mill is equipped with a stretch-control unit, which consists of a driven roll and nip roll to pull the warp from the creel and deliver it to size box with a minimum amount or predetermined amount of stretch.

A feature which is considered to be of considerable value also is the ease with which the slasher is operated; any experienced slasher man can operate it.

Although the slasher is intended primarily for sizing filament and spun synthetic yarns, it is also said by the manufacturer to be applicable to cotton yarns.

Case 38

Infra-Red Lamp Placement For Quick Drying

DRYING of duck panels screen printed with an identifying marking was made more efficient at C. R. Daniels Inc., Daniels, Md., by rebuilding and repositioning the infra-red lamp unit mounted over

REBUILDING and repositioning of infra-red lamp unit cut labor costs by two-thirds in drying duck panels.

the conveyor belt system.

The original set-up included an enclosed bank of 120 240-watt lamps mounted above a 35-foot conveyor belt. The duck panels, intended for sewing into ice bags, were first screen printed and then dropped on the belt. Drying equipment was not sufficient to thoroughly dry the printed cloth so that two men were required to catch the pieces at the end of the belt and lay them out flat for complete drying. The entire operation took about an hour and required three men to handle.

The problem was solved by conforming to two principles: air circulation is required for proper drying, and heat concentration makes quick drying possible. The enclosure around the infra-red units was eliminated to permit circulation.

The 120-lamp unit was replaced by a 32-lamp unit of the same wattage; this was done by mounting the lamps in a stainless steel reflector at an angle and setting the unit two inches above the conveyor belt at the beginning of its path. A stainless steel reflector was also placed beneath the belt.

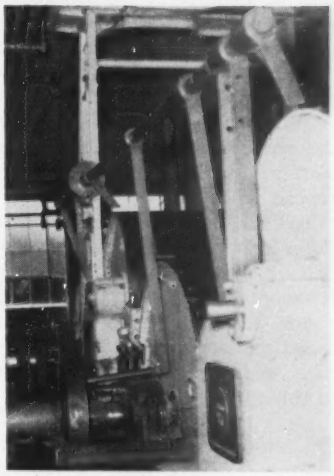
Now the drying operation requires only one man, the printer, to place the parts on the belt; by the time they arrive at the end of the belt they are completely dry and can safely drop into a container untended.

Case 39

Interlock Prevents Unsafe Operation of Waste Machine

LIABILITY insurance safety engineers requested that West Boylston Mfg. Co. of Ala., Montgomery, Ala., install some form of safety interlock on its two-cylinder waste machine, to prevent the machine from operating with the covers open over the beaters or screens. The mill did this:

A shaft is mounted horizontally in bearings over all covers. Arms are pinned to the shaft, which projects over the covers. There is also an arm mounted over the beater shaft; a pin mounted on the bottom of the arm just clears a disk fastened to the beater shaft. The disk has slots for the pin to project through, so that the beater shaft can not be operated with the covers in the locked position.



WASTE MACHINE interlock, shown in unlocked position.

Case 40

Automatic Dispatch Systems Save 80 Man-Hours Weekly

BECAUSE of efficiency made possible by a Cleveland Tramrail Dispatch System for the delivery of warper beams from one building to slashers in another building at Mooresville (N.C.) Mills, 80 man-hours are being saved weekly.

Beams are lifted by the Tramrail equipment off the warpers and are delivered directly to the slashers or to storage without anyone accompanying. The same men operating other equipment can take care of the beam delivery. Bad weather does not hold up beam delivery because operatives never have to leave the buildings.

BEAM travels outside between buildings. Pointed guard on carrier opens doors automatically.

Case 41

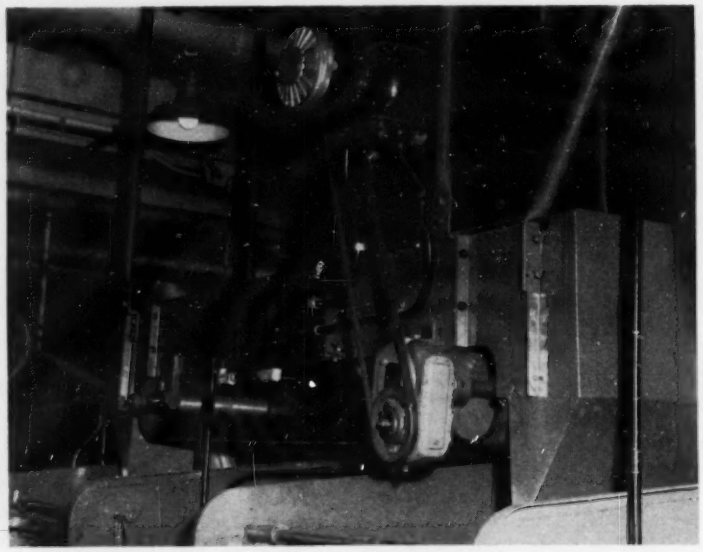
Hydraulic Drive Solved Maintenance Problem on Reversing Apron Conveyor

UNTIL recently, the Proximity Plant of Cone Mills Corp., Greensboro, N. C., used a dual-pulley belt system to drive the reversing aprons which control the flow of stock from the condensers to the pickers. A twisted belt was incorporated to reverse the apron.

This arrangement permitted slippage and delayed action, which resulted in frequent plugging of the chute from the condenser, as well as causing delays for drive repair.

To solve these difficulties, a Twin Disc single-circuit Hydro-Sheave drive was installed. This is mounted on the shaft of a 1-hp motor, connected by V-belts to a speed reducer. Output shaft of this speed reducer is directly connected to the apron drive.

Since the installation of the Hydro-Sheave drive, no trouble has been experienced with the reversing of the apron, and maintenance and plugging difficulties have almost completely disappeared. The experimental installation was so successful that Cone Mills are proceeding with other installations.



HYDRAULIC DRIVE controls action of reversing aprons to prevent plugging of chute from condenser, requires little maintenance.

Case 42

Reed With Wide Dents Gives 10 Per Cent More Weaving Space

ONE large Georgia mill has been running over 1800 looms entirely on Nu Reeds manufactured by the Pioneer Heddle and Reed Co. of Atlanta, Georgia.

The Nu Reed enables a mill to use a dent or wire strong enough to weave any construction ranging from bag goods to light duck without realigning the loom. This is accomplished by (1) maintaining the same size rib on the shuttle side of the reed, (2) increasing the width of the dent or wire from 150 to 250 thousandths, (3) reducing the size of the back rib to equal the wire width increase. Therefore, the overall size of the rib is not increased.

This mill increased the width of dents or wires from .105″ to .150″ and decreased the thickness of the wire to give approximately 10 per cent more weaving space. The reed gives longer life due to the wider and thus stronger wire, which enables the reed to withstand abuse or rough treatment.

The weaving advantages of the reed that appeal to this mill are more air space, allowing knots and slubs to pass through the reed, and less chafing of the warp ends.

Case 43

Tension Compensators on Quillers Insure Uniformly Wound Filling

A CANADIAN weaver of synthetic and glass fabrics was receiving complaints of defects in finished goods; the defects were traced to uneven filling tension. Tension variation was greatest at the beginning and end of cones used as supply packages for quilling. Considerable experimentation with winding processes brought no results.

The mill then installed Kidde Double Disc Tension Compensators on its quillers, and the complaints stopped immediately. This device compensates automatically for the difference in tension between a large and a small package. The superintendent of the mill states that the tension compensators paid for themselves in reduced seconds on one order.

At this mill, the double disc tension compensators are used in quilling 70/34 nylon filament and glass yarns as fine as 900/1/2.

Case 44

End-to-End Stitcher Reduces Waste at Shearing and Brushing Machine

SWIFT Manufacturing Co., Columbus, Ga., has substituted a Merrow stitching head for the conventional lap-seam stitcher at the shearing and brushing machine. The Merrow end-to-end stitch has reduced seam cut-off waste by two inches per seam.

Wrinkling before and after seams at the compressive shrinking machine was eliminated almost entirely. Reduction of compressive shrinking wrinkles in turn reduced the amount of cloth cut off at seams on the folders. The end-to-end seam is cut in the center at the folder, thereby effecting a saving of from one inch to two inches per cut of cloth.

Broken selvage seams from the shearing and brushing machine stitcher were eliminated by installing Southern Textile Machinery Co.'s speed reducing attachment in conjunction with the Merrow stitcher. This attachment permits double stitching to a point inside the selvage edges.

Case 45

Weave Room Efficiency Improved With After-Waxing Attachment

A NUMBER of southern mills have installed after-waxing attachments at the front of the slasher to apply hot wax to the dried warp yarn. The attachment consists simply of a trough with a revolving roll in contact with the warp sheet, and a feed system.

Results reported include improvement in smoothness and pliability of the yarn, decrease in warp stops at the loom, increased loom production, reduction in number of seconds, and less shedding. One mill also feels that the wax lubricates the heddles, reed, and shuttle.

The applicator is placed at the front of the slasher, between the guide roll and the first split rod. Speed of the applicator roll is about 1 to 5 rpm, depending on the speed of the slasher.

The amount of wax applied varies from 0.1 to 0.6 per cent, according to the type yarn, and is applied at about 180 F. The usual size formula is not changed when warps are after-waxed.

Case 46

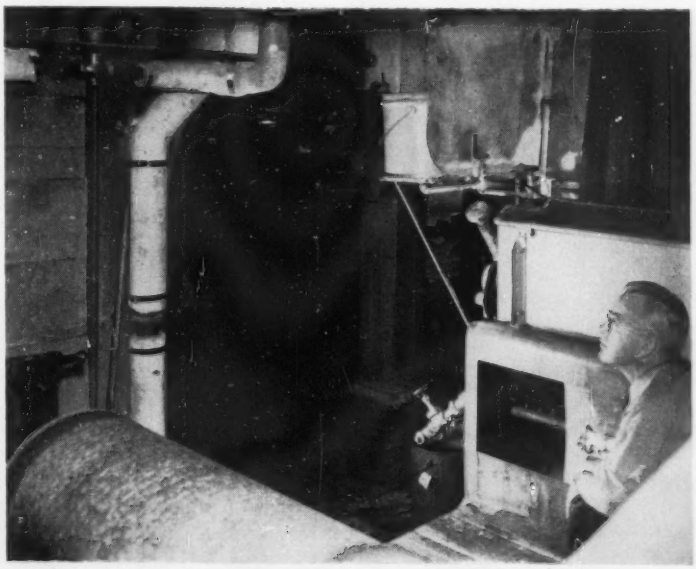
Rinse Device Protects Printing Blanket

A SIMPLE control device, employing a single time delay relay, provides automatic protection for the blanket used in the Dewey & Almy Chemical Company's Darex textile printing process.

An Agastat time delay relay, made by the AGA Division, Elastic Stop Nut Corporation of America, is used to control a rinse spray valve in the blanket washer. During normal operation the endless blanket travels rapidly through the solvent section, where ink is washed off, then through a rinsing section.

When the blanket stops moving, a small portion of it will have been exposed to solvent but will not yet have reached the rinse section. If the solvent were allowed to remain on the belt, it might damage its special surface. Therefore a special rinse for this section is required.

Manual opening and closing of the rinse valve is not dependable. The operator might forget or might be absent when emergency stop-



INSTALLATION of a Darex blanket washer in a New England textile plant. Open washer base shows spray nozzles which rinse blanket when machine stops. Water flow to nozzles is controlled by solenoid valve (top left) which is opened and closed automatically by Agastat time delay relay.

page occurs. Instead, an Agastat time delay relay, of the type which begins its time delay when its coil is de-energized, is used. This relay also has an auxiliary switch. When the machine is operating the relay contacts are in normal position. When power to the washer is cut off, the relay coil is de-energized and time delay begins. At the beginning of the time delay period the auxiliary switch transfers. This completes a circuit energizing the solenoid valve, and rinse water flows.

At the expiration of time delay the main contacts transfer. This opens the solenoid valve circuit, thus shutting off the rinse water. When the machine is started again both sets of contacts transfer immediately so rinse water does not flow until the machine stops.

This simple control circuit, which does not require elaborate wiring or additional relays, is possible because this model of the Agastat time delay relay begins its time delay when power is cut off. Some time delay devices require a flow of current during their timing period, and thus their use would necessitate a much more elaborate control circuit.

Case 47

Manual Cleaning Reduced 15% When Spinning Frame Cleaners Installed

SWIFT Manufacturing Co., Columbus, Ga., has installed three Parks-Cramer Type CT spinning frame cleaners on warp spinning frames. Since the installation of these cleaners, manual cleaning has been reduced 15 per cent.

Each frame is serviced by the traveling cleaner every five minutes, with air directed to the top and center creels, roving guide bar, thread board, ring rail, and spindle bases.

The frame cleaners have also been responsible for an improvement in yarn quality.

Case 48

Photocopying Machine Cuts Costs of Reproducing Weave Patterns

THE WEAVING mills of J. P. Stevens & Co., Inc., have cut the cost of reproducing weave patterns in setting up looms, by the use of the Copease Duplex photocopying machine. The machine reproduces black-on-white duplicates in a matter of seconds by a combined operation of developing and printing.

This machine produces clear copies of the patterns, thus enabling mills to follow loom set instructions with a minimum of effort. The new copy method is said to have cut in half the cost and time of reproducing weave patterns.

Copies are permanent, fadeproof, and can be made on paper of any weight. Exposure, development, and printing are all performed with one machine without any special lighting, dark room, or extra accessories. The machine is about the size of a typewriter and may be operated from either a sitting or standing position.

The Copease Duplex is distributed by Copease Corp., 270 Park Ave., New York, N. Y.

PHOTOCOPYING MACHINE is said to cut in half the cost and time of reproducing weave patterns. Sample pattern for synthetic fiber fabric is shown at upper left.

Case 49

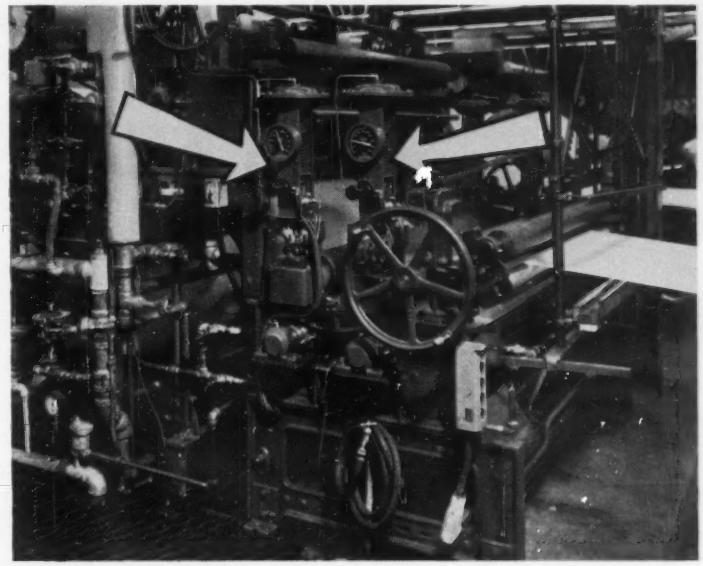
Uniform Slasher Squeeze Roll Pressure Applied with Pneumatic Loading Motor

A WELL-KNOWN rayon weaving mill has installed Taylor Instrument Companies' pneumatic squeeze roll loading motors on its slashers, and is now able to adjust roll pressure to give a uniform add-on across the entire width of the warp.

The Taylor device makes it possible for the mill to adjust each side of a squeeze roll individually and accurately, so that the same nip pressure is applied to each side. It signals at a glance if the rolls become out of round.

This pneumatic loading device consists of an actual loading motor, having its own reducing valve applying air pressure to the top. Mounted in the drive stem itself is a volumetric compression-type element which measures in pounds pressure the amount of force being exerted. One motor is necessary for each end of a roll.

A 1000-lb unit on each end of a roll makes it possible to apply a total load of 2000 lb, plus the weight of the roll, which this mill has found to be ample for any slashing operation.



LOADING MOTORS on the squeeze rolls of this slasher give a uniform add-on across the entire width of the warp.

Case 50

Carpet Mill Ups Production with New Raw Stock Machines

MAGEE Carpet Co., Bloomsburg, Pa., recently installed one 100-lb and eight 1000-lb stainless steel automatic pressure dyeing machines for raw stock, and one laboratory machine. All were made by Venango Engineering Co.

According to the general manager of the mill, this installation has made it possible to increase production and to effect savings on dyestuffs, chemicals, and steam.

The raw stock dyed in these machines has unusual loftiness and fiber strength, which has permitted production in the card room to be increased.

Case 51

Floating Bottom Roving Truck Speeds Creeling

FLOATING bottom roving trucks are permitting A. M. Smyre Mfg. Co., Gastonia, N. C., to creel the Gwaltney spinning frames more efficiently and at lower cost. The trucks are made by Excel Textile Supply Co.

The roving frame operator uses a split-doff unit for doffing. This unit consists of two separate trucks that hold a half doff of sixty 10 x 5 bobbins. The operator doffs his roving frame into these two trucks, which are equipped with "Auto-Magic" floating bottom. As the trucks are loaded the bottoms automatically depress. When the trucks are filled they are pushed into the spinning room.

In the spinning room the spinner gets one of the full trucks of roving and hooks a small aluminum empty-bobbin box on one end and then pushes the truck along the aisles of her frames and creels directly out of the truck. She puts the empties in the bobbin box.

These trucks eliminate a roving hauler, because the spinner creels from the same truck into which roving is originally doffed in the card room. This can mean savings of several thousand dollars per year. Another advantage is that the roving does not have to be laid up or transferred into a smaller box or truck. Roving is stored in the trucks, making for cleaner roving with less damage.

The elimination of the laying up of roving on the spinning frames means cleaner machines, fewer slubs, better yarn, and cleaner housekeeping in the mill.

Use of the roving-creel truck also means the spinner always has the full bobbin of roving exactly at the right place when she needs

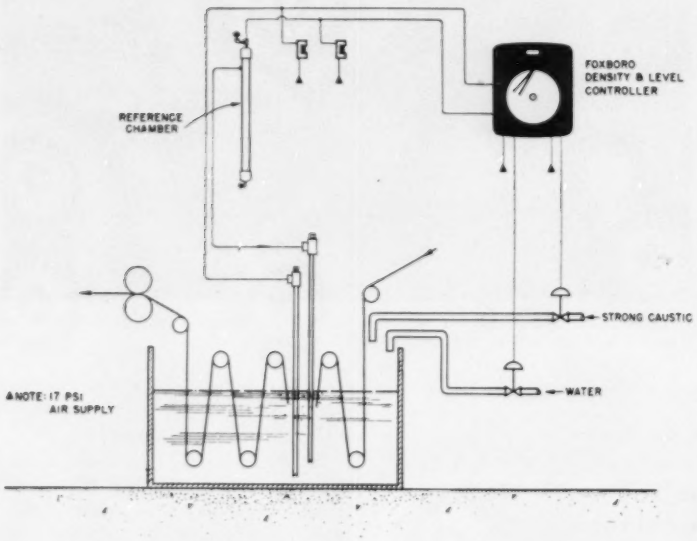
it, because she pushes the truck right along with her all the time.

The employees are especially pleased with these trucks because the floating spring bottom means a constant supply of roving always at the finger tips of the operators. No bending, no stooping, no stretching by the operators reduces fatigue and increases efficiency.

Smyre Mfg. Co. has found that the use of these trucks makes for better, more efficient handling of roving from the cardroom right on through the spinning room.

Case 52

Caustic Concentration and Level Control Cuts Mercerizing Costs



SO SUCCESSFUL was the Exeter Manufacturing Company of Exeter, N. H., in saving caustic (average of $40 weekly) and improving the quality and uniformity of mercerizing through automatic control of caustic bath density, that it has extended its caustic control program to other operations.

Exeter's first caustic controller, manufactured by The Foxboro Company, was installed in April, 1953. It consists of a single instrument (see sketch) which prevents caustic waste by automatically and continuously admitting only enough strong caustic and water to keep mercerizing bath concentration at a precise 22% NaOH, virtually impossible to achieve with a hydrometer and manual adjustment. A dual action controller, it also keeps bath level at the right depth for quality processing.

Recently, the same system was installed for caustic makeup, with signal lights added for flow and level warnings. Two large bleach kiers left idle when Exeter went to continuous bleaching have been converted into storage tanks for 50% caustic and for weak caustic recovered from mercerizing but formerly wasted. These solutions are automatically mixed to 30% concentration in a 1500-gallon holding and cooling tank which feeds the mercerizer and two 500-gallon tanks which in turn feed the caustic saturator in the continuous bleaching system.

MERCERIZING BATH control system at Exeter Mfg. Co., Exeter, N. H.

With weak caustic being recovered from the mercerizer, Exeter has not only cut its waste of caustic still further but has eliminated one of the causes of stream pollution.

Case 53

Drying and Curing Production Tripled, Costs Cut 50%

TIFTON Rug Mills, East Point, Ga., have increased production on their latex drying and curing for rug backing by almost 300 per cent, and yet have cut fuel and operating expenses by 50 per cent. This was accomplished by the installation of a J. O. Ross 30-foot direct-fired gas, three-pass latex drying and curing oven.

The job was formerly done with infra-red bulbs at speeds of 7 to 9 feet per minute. Speed of the new unit is in excess of 20 feet per minute.

A better cure is now obtained on the latex, and the mill is able to use a less expensive compound.

Despite the increased production, fuel consumption has been cut in half compared with the former electrical unit. Aiding in the fuel cost reduction is a well-insulated housing, with 95 per cent air recirculation.

The rug leaves the coater and makes three passes through the unit on driven rolls, where high-velocity air is at all times impinged directly on the goods in the dryer.

LATEX CURING for rug backing is accomplished at speeds in excess of 20 feet per minute in this dryer-curer.

Case 54

Coated Filling Grates Require Less Cleaning

COATED filling grates made it possible to extend the cleaning cycle from once in 8 hours to once in 24 hours at one southern weaving mill where 650 looms are equipped with the coated grates. Other mills report a similar lengthening of the time between cleaning of filling grates.

The grates are coated with a fluorine-containing resin (Teflon or Kel-F) through the method developed by the Deering Milliken Research Trust. Because of the nature of this resin, lint, size particles, grease, dirt, and moisture do not adhere to surfaces which have been coated with it.

The Draper Corp. is exclusive licensee for sale of new coated grates. Four commission coaters are licensed to coat grates received from mills: General Plastics Corp., Patterson, N. J; Industrial Coatings, Inc., Greenville, S. C.; Livingstone Coating Corp., Charlotte, N. C.; and Plastic Coatings, Inc., Greenville, S. C.

Case 55

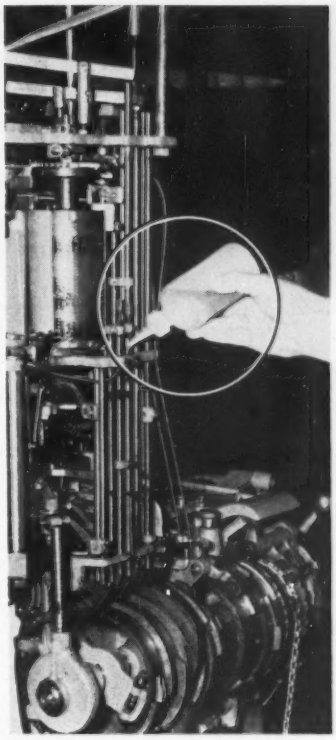
Adapters Increase Twister Bobbin Size 33%

A SOUTHERN cotton yarn spinner has replaced wooden twister bobbins with paper bobbins, using the Regnery aluminum adapter, and has increased bobbin size by 33 per cent. Yarns from 10s to 30s are twisted, two- to four-ply.

The increased bobbin size has permitted the mill to eliminate one doffer and to drop one whole shift of winding on a 38-twister, three-shift basis.

Waste has also been reduced because of the fewer bobbins handled, but the mill is not able to give an accurate estimate of the amount.

The aluminum adapters are manufactured by the F. L. Regnery Corp., Chicago, Ill.



THERE'S NO QUESTION as to how much oil is left in the plastic container being used to lubricate this machine. The operative can see it at all times.

Case 56

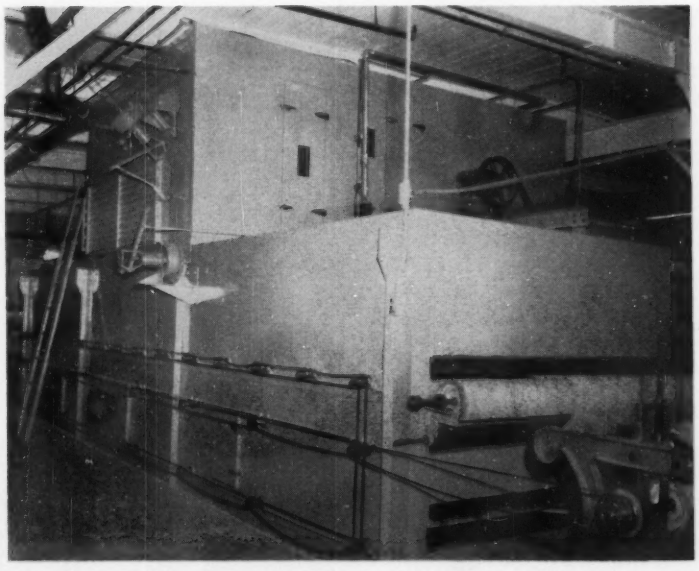
Plastic Oiler Costs Less, Is More Efficient

A POLYETHYLENE plastic oil can supplied by O. F. Zurn offers several advantages over conventional metal cans, a southern textile mill finds. Oil is easily applied either drop-wise or in squirts, and the short spout is not likely to get caught in moving gears or cogs.

The oiler can be operated with one hand, and can not become clogged as a metal-spouted oil can does. The oiler is unbreakable, and so is not damaged by dropping.

The amount of oil in the container is always visible. The can does not leak, since it has a screw top.

The cost of the oiler is about one-fourth that of a metal oil can of similar capacity.



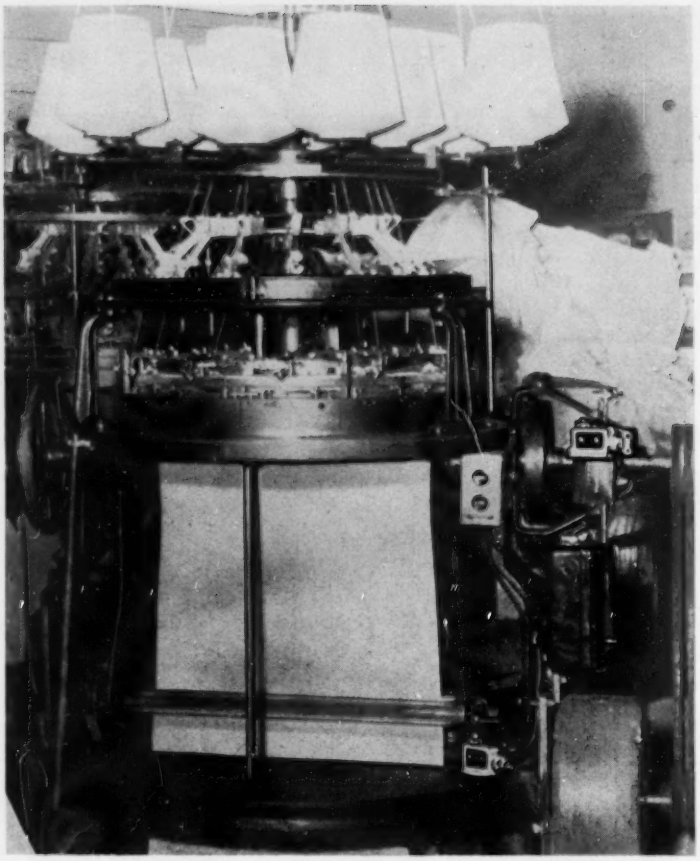
Case 57

Stop-Motion Switches Save $12,500 Annually

TWO Micro precision switches were installed on each of the 250 knitting machines at the E-Z Mills, Cartersville, Georgia, to provide automatic protection to the needle beds. R. E. Miller, plant superintendent, estimates that this protection is worth at least $50 on each machine in the course of a year.

One of the switches, the upper one in the illustration, replaces a mechanical stop motion which had not been too dependable in stopping the motor in case of thread breakage above the cones. The possibility of damage in case of thread breakage below the cones is provided by the lower switch.

This lower Micro switch is operated when thread breakage allows the takeup roll to drop, and the motor is stopped immediately, before the needle beds can be damaged.



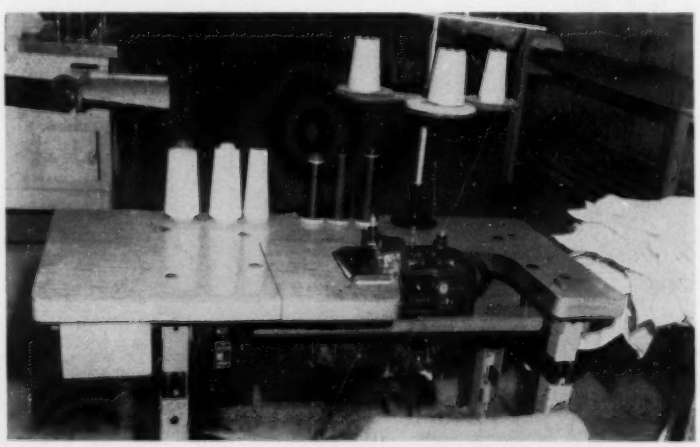
PRECISION SWITCH at upper right replaces mechanical stop-motion. Lower switch stops motor before needle beds can be damaged.

Case 58

A Dollar a Dozen—the Saving on Hosiery Mending with Overedger

A SINGER Class 246-3 overedging machine is used in one full-fashioned hosiery mill in reclaiming grey hosiery rejects. By using this machine instead of a former method, the mill has made a direct labor saving of slightly more than a dollar on each dozen reclaimed from waste.

A record of costs showed that "reclaims" being mended by an experienced seamer on a hosiery seaming machine averaged approximately $1.36 per dozen in labor cost. After installing the Singer overedger the mill was able to perform the reclaiming operation at a cost of approximately 31 cents per dozen. The overedger



OVEREDGER reclaims grey hosiery rejects at a cost of 31 cents per dozen, compared to a cost of $1.36 per dozen on a hosiery seaming machine.

cuts and sews in one operation, and the saving amounts to $1.05 per dozen. The quality of the mended reclaimed hosiery is improved considerably.

Hosiery "rejects" in this mill are stockings that have been cut or damaged along the seams during the manufacturing process and which are classified as waste. These stockings are usually sold to converting plants at a fraction of their original cost and represent a heavy loss.

This mill formerly sold the rejects as waste. Rejects worthy of mending were classified as "reclaims." The reclaims were trimmed and mended by an experienced seamer who used scissors for trimming and a hosiery seaming machine for mending. The reclaimed stockings were classified as irregulars and seconds upon processing in finishing.

The Singer overedger is also used to mend defective finished hosiery. Colored thread is used to correspond with the seam to eliminate redyeing, an operation necessary when undyed seaming thread is used.

The same overedger serves to cut and sew all dye nets used in this plant. A cost record of materials and labor shows that the mill saves 50 per cent by using the overedger.

Case 59

Lubricant Permits Knitting Mill to Extend Oiling Cycle

LUBRICATION of chain drives and gears and outer surfaces of yarn changing drums on Hemphill SCOP knitting machines had to be done weekly on three-shift operation at a well-known southern mill. Grease would not stay on these parts, and oil would run off. Neither grease nor oil provided the constant film so necessary to hold friction and wear to a minimum.

Recently the mill began to use O. F. Zurn's Stazelube #508 for lubrication of these parts. This lubricant clings to the working surfaces, and does not drip or run off. The machines are now lubricated once every four weeks on three-shift operation, with a resulting saving in labor, wear, and oil.

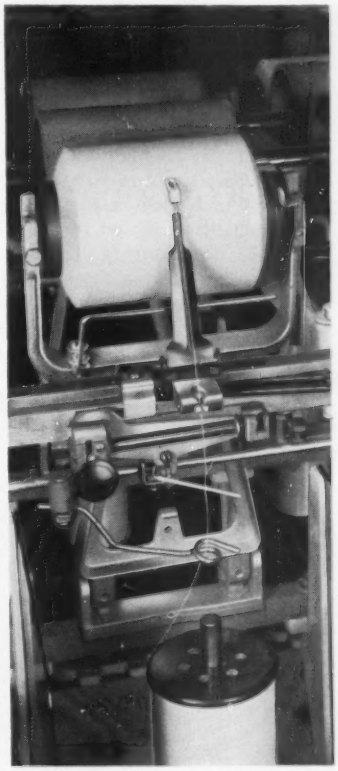
Case 60

Ceramic Guides Improve Quality in Nylon Tricot Plant

KINGSBORO Mills, Inc., McMinnville, Tenn., has replaced metal with ceramics at practically all yarn contact points in throwing and warping operations. Replacement was made with AlSiMag guides, manufactured by American Lava Corp.

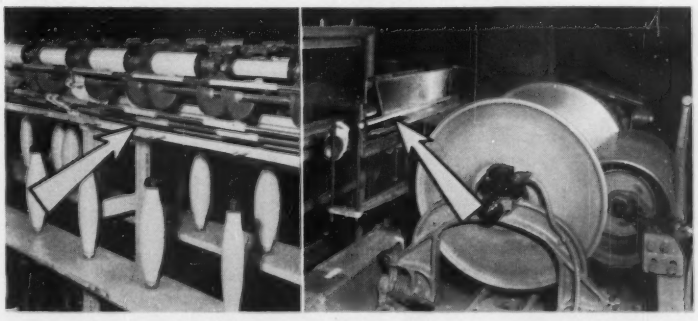
On U. S. Textile face drive double deck uptwisters trouble was experienced with overwinds, ringiness in packages, and nonuniformity. Machine changes had to be made to wind packages of different size and traverse. Special AlSiMag traverse guides now provide controlled tension and lower coefficient of friction which have eliminated the problems caused by the plated metal guides. Switch to other denier yarns can now be made with a minimum of machine changes. AlSiMag drop wire sleeves were also installed.

On U. S. Textile redraws, the mill has replaced gate tension devices with tension bars on which are mounted AlSiMag guides. The metal bars when used alone put an uneven tension on the yarn at different parts of the traverse; the tension was greatest at the



CERAMIC traverse guides and drop wire sleeves eliminated overwinds, ringiness, and nonuniformity on face drive double deck uptwister.

REDRAW (left) is equipped with ceramic guides on tension bars; tension is now uniform across entire width of traverse. Right: ceramic bar holds threads in position at reed of warper.



ends of the traverse, causing the bobbin to be high in the middle. AlSiMag guides now provide even tension across the whole traverse.

On Reiner warpers, AlSiMag tension bars are now used at the creel; and an AlSiMag bar holds the threads in position at the reed of the warper, permitting the ends to fill the beam exactly from side to side.

In all cases, the AlSiMag guides provide uniform tension, have long life, and do not chafe or damage yarn.

Case 61

Warp Oiling Device Eliminates Throwing, Improves Knitting

ZOR-KNIT Mills, Inc., Carlton Hill, N. J., manufacturer of tricot fabrics, have installed a warp-oiling device on their warpers, which has enabled the mill to eliminate throwing and achieve smoother knitting.

The warp oiler, manufactured by Robert Reiner, Inc., is installed between the warper and the yarn storage device and consists of a roller immersed in a specially compounded oil bath, and a feed system. The speed of the roll is adjusted so that the rate of yarn lubrication is commensurate with warper speed.

Oiling the warp is claimed to have the same effect as throwing, i.e., the danger of filaments ballooning and fracturing is considerably lessened.

With the warp oiling attachment, Zor-Knit now warps untwisted nylon directly from pirns.

The mill has also installed Simco static eliminating equipment on both creel and warper. On the creel, a static bar is located at each stop motion bar; all static bars on each vertical wing of the creel are connected in series. On the warper, two static bars are mounted directly after the eyeboard, one bar above and one below the yarn. Another bar is mounted just ahead of the reed and a fourth between reed and beam. Where necessary, the static bar brackets are hinged so that the bars can be swung out of the way for threading the machine.

According to executives of the mill, the static bars on the creel specifically serve to eliminate ballooning of the yarn between creel and warper, enabling them to run the warper efficiently at highest speeds. By eliminating ballooning, moreover, uniform tension of all threads is maintained, producing a smoother beam without ridges, and resulting ultimately in much better quality cloth.

It has also been found that the elimination of static at the stop motion reduces the accumulation of lint at the stop motion elements and improves their functioning.

Zor-Knit states that the Simco static eliminating equipment on creel and warper is essential to the production of uniformly tensioned ridgeless warps at high speeds.

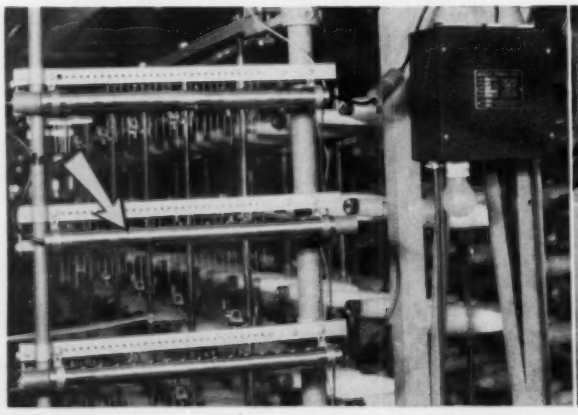
Case 62

Machine Applies Transfers to 2,000 Dozen Pairs of Hosiery Daily

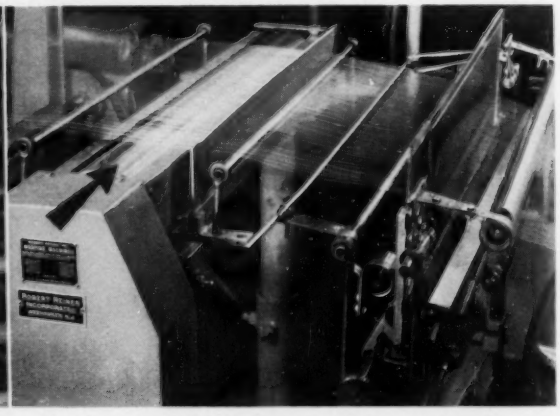
A LARGE, nationally known hosiery manufacturer reports that it cut direct labor cost up to 50 per cent on transferring, attaching of gummed rider tickets, folding and boxing operations in the finishing department with the new Paramark Model 3 transfer machine, and auxiliary units made by Paramount Textile Machinery Co. Applying two transfers simultaneously, average daily production on this machine totals over 2,000 dozen pairs of hosiery.

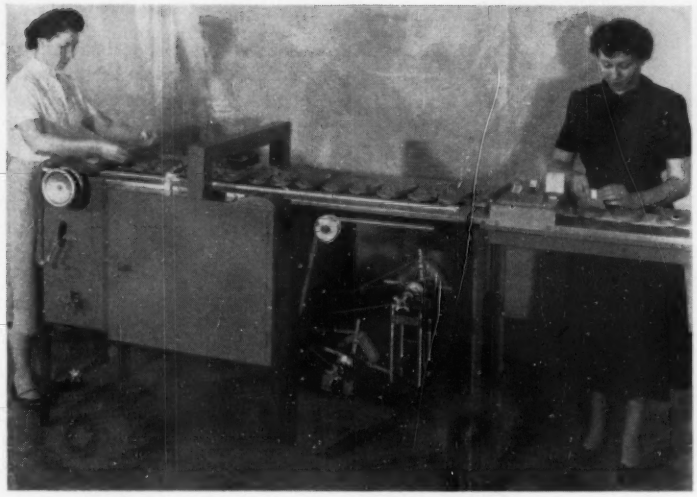
The company also reduced indirect labor handling operations

STATIC ELIMINATORS (arrow) are located at each stop motion bar of the warper creel.



WARP OILER (arrow) permits warping of untwisted nylon directly from pirns, eliminates throwing.





TRANSFER MACHINE permits operators to attach rider tickets, band, and box hosiery in a continuous operation.

from six to two; less floor space is needed since it is no longer necessary to store goods for each operation — this feature also reduces work in process inventory and provides faster customer delivery of finished goods. Direct labor cost savings alone allowed the company to recover the purchase price of the machine in three months.

One operator places hosiery on conveyor belts which carry the goods to the transfer irons where one or two transfers are applied. Auxiliary conveyor units are attached to the machine, allowing operators to attach rider tickets, band, and box the hosiery in one assembly line operation at this knitting mill.

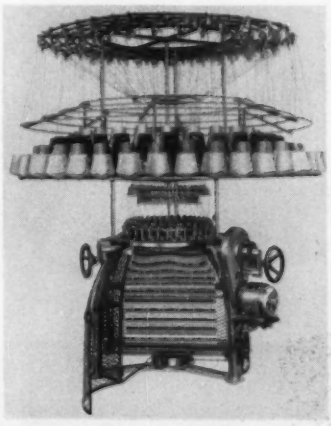
Case 63

One-Machine Cost, Two-Machine Production

ARGO Knitting Mills, Schuylkill Haven, Pa., has acquired the latest Model SAAF/C variable stripe, jersey, circular, knitting machine manufactured by Supreme Knitting Machine Co., Inc. This machine was installed in June 1954.

The machine has a striping box on each of its thirty-two feeds, which has enabled Argo to produce on this model the equivalent of the output of two other machines. Operating one machine in place of two resulted in a saving of operating labor, maintenance cost, and power consumption, and made available additional floor space for other uses. In addition, the 32-pattern placer units, in conjunction with the 32 four-color striping boxes, provides this machine with greater patterning versatility, permitting production of cloth having larger and more varied patterns.

The mill recently acquired parts to permit conversion of this model to the model SAAF/O, thereby, in addition, enabling the manufacture of jersey sections with knit-on simulated rib trim.



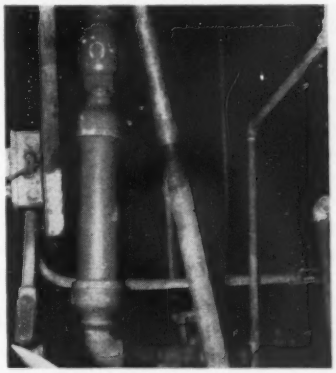
STRIPING BOX on each of this machine's 32 feeds has enabled Argo Knitting Mills to obtain the production of the equivalent of two conventional machines.

Case 64

Dye Penetrates Stockings Better with Conditioned Water

GEORGIA Hosiery Mills, Blakely, Ga., installed two Packard water conditioners in May, 1954—one on the mill boiler and the other in the water line to a 150-pound paddle dye machine.

Since the installation, the boiler has remained practically free of scale, and has therefore permitted the mill to save the price of all boiler treatment during the period. Fuel costs have been reduced about 25 per cent, and preheat time has been shortened.



WATER CONDITIONER installation on dye machine brought about a 25 per cent reduction in soap consumption.

Soap expenses have been reduced 25 per cent since the water conditioner was installed on the dye machine. Penetration of dye into the gores of the heels and toes of socks is improved, a factor which formerly gave trouble on light shades. As a result, seconds have been reduced.

CASE HISTORY REPORTS

KNITTING

Case 65

Predryer Increases Production in Boarding Department

A DRUM-TYPE steam heated drying unit recently installed in the boarding department of a southern hosiery mill has permitted the mill to more than double the output of 24 boarding forms on some types of goods. The increase in production is made possible by predrying the hose as they come from the extractor.

The dryer, manufactured by Huebsch Mfg. Co., Milwaukee, Wis., has an internal paddle wheel to tumble the goods, similar to the operation of home laundry dryers or the type used in commercial laundries. The process also helps to fluff up goods made from soft-spun yarns.

The speeding up of the boarding process has made it unnecessary for the mill to buy additional boarding forms. The dryer is especially useful on heavy goods, such as dyed or ingrain hosiery of cotton, wool, or mixtures.

Case 66

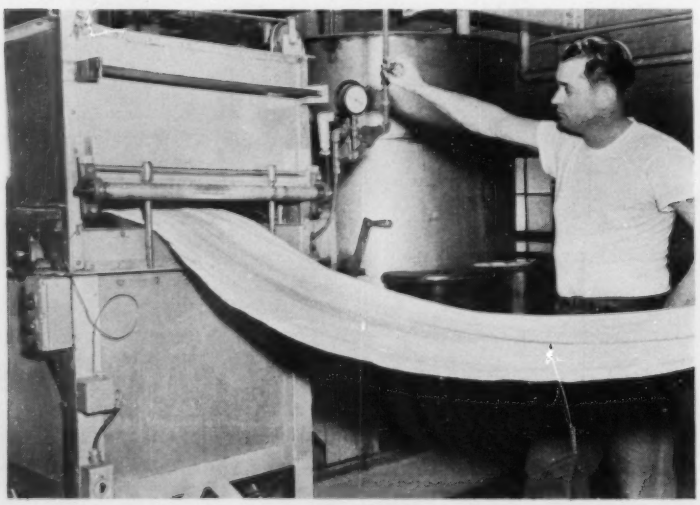
Knitting Mill Saves Extra Step: Adds Fluorescent Agents to Peroxide Bleach Range

IN THE past, attempts to apply fluorescent agents to bleached knit goods in kier, reel machine, or pad have resulted in nonuniform pick-up and streakiness. This was due to physical difficulties in distributing the fluorescent agent evenly, and the chemical variation of bleached goods.

Wide variations in pH exist on cloth that is not thoroughly washed after bleaching where acid is used to neutralize residual alkali, particularly in the case of cloth bleached and washed in the kier. Since fluorescent agents are sensitive to pH, variations in shade were a common occurence.

With the aid of technical representatives of the Becco Chemical Division, Food Machinery and Chemical Corp., Standard Knitting Mills, Inc., Knoxville, Tenn., developed a system which gives uniform results. In this system fluorescent agents are applied to grey knit goods in a wetout saturator, prior to hydrogen peroxide bleaching. The equipment used was designed and built on the premises. Only one operator supervises the entire process.

FLUORESCENT agents are applied to grey knit goods in saturator at constant temperature of 140 F.



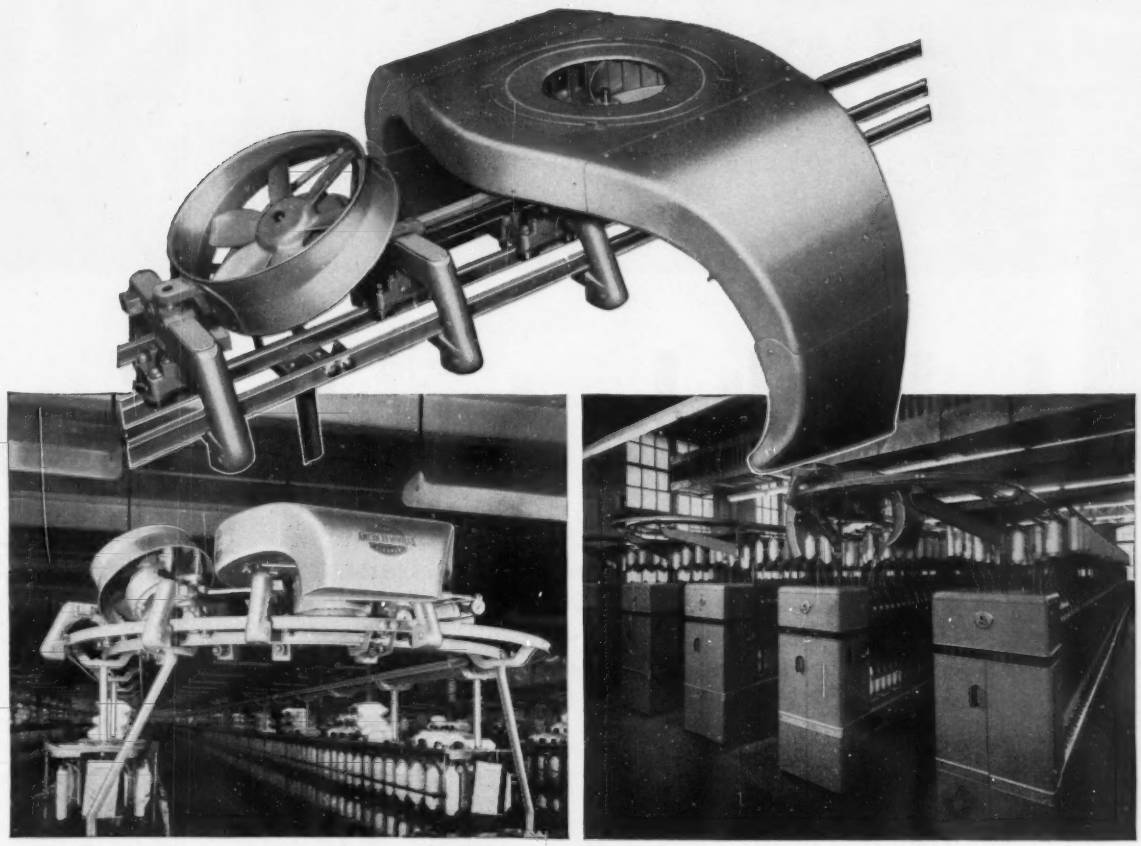
Here, in brief, is the procedure followed by Standard Knitting: the fluorescent and wetting agents are agitator-mixed in 700 gallons of water at 140 F in a stainless steel mixing tank. The amount of fluorescent agent used varies according to the individual standard white. The amount of wetting agent also varies depending on wetability, but is usually about 0.5 per cent, based on the weight of the goods. Two hundred gallons of the mixture are dropped into a saturator and the cloth is run through in rope form at about 100 yards per minute, squeezed to 100 per cent saturation.

A uniform level is maintained in the saturator by means of a constant-level bulb and pump. A constant-temperature device maintains a temperature of 140 F in the saturator. Minor changes in squeeze-roll pressure are made to insure 100 per cent cloth saturation of variable unit cloth weights. The wetout solution remaining in the saturator is saved for use in the subsequent lot.

The saturated grey goods are then loaded into a piler kier with a capacity of 5000 lb of saturated material. Liquor make-up in the kier is 3 to 4 per cent Becco hydrogen peroxide 35 per cent, 3 to 4 per cent sodium silicate, and 0.25 per cent each soda ash and polyphosphate, based on cloth weight, added to water in a 4 or 5 to 1 liquor ratio.

When all the cloth is in the kier, circulation is continued for 20 minutes before the temperature is raised slowly to 190 F and maintained with continuous circulation for about six hours.

Not only does this system offer time-saving over that in which the wetting out is performed in the kier, but it is also no longer necessary to rework streaked and nonuniform cloth. Cutting and sewing are no longer hampered with cloth matching operations, regardless of cloth style.



"no manual cleaning . . .

on high speed frames spinning low count waste yarns"

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In addition to low maintenance cost, there are many other advantages of American Tri-Rail Cleaners.

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- HIGHER VELOCITY
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MERCHANDISING

schedule production

Any industry which operates without market plans and converts marketable raw materials and money into unmarketable manufactured goods for dead storage will find itself in for too many famines and too few feasts.

By An Industry Observer

NO. 3 OF A SERIES — EXCLUSIVE

THE AUTHOR of this piece, it should be said in all frankness, has no great technical qualifications as a writer in the textile management field. He has never been confronted, as management has, with community responsibilities; he has never contended with a union; he has never financed a mill nor battled with a banker; he has never had expensive machinery on his hands eating up investment capital in interest and amortization. He has never faced a bad market nor profited from a good one.

The comments which follow, therefore, are undertaken only on the theory that one doesn't have to be a hen to tell when an egg is rotten.

It can safely be taken as a fact that no industry is inherently bad. That no problems with which management in any industry is confronted are beyond management's reach if sufficient will and intelligence are applied to their solution.

No Sound Period in Textiles. This being so, it is an extremely sad thing to follow the record of the textile industry through the major part of its history without finding any measurable period of time in which conditions could be described as good. It is relatively easy to find periods in which the business was prosperous but next to impossible to find one in which it was sound, in the normal understanding of the term.

The prosperous periods nearly always have common characteristics which point to inevitable disastrous reactions. In the first place, the times of relative or actual prosperity inevitably are associated not with any advanced management techniques, sensational improvements in method, or a deliberately created new market opportunity. They do not rely for their existence on planning or foresight from within the industry but rather on purely accidental factors with which the industry had nothing to do or over which it had no control.

Exploitation Only Brought Greater Losses. The industry has, it is true, exploited such opportunities as shortages, wars, inflation, et cetera, but it has never been noted for the creation of opportunities of its own. Even in the process of such exploitation, it often permits and encourages excesses which must inevitably bring greater losses when the tide of fortune turns.

Having contributed nothing to the creation of the prosperity when currently being enjoyed, it has been the custom, nevertheless, for management to take credit for its existence and to act as if it could be maintained by action of the industry itself. Thus, dividends are paid at unwarranted rates, expansion, where possible, is carried out at a feverish pace. Advertising, merchandising, and market research are neglected and starved for funds.

Then, when the tide turns, as it inevitably must, when "peace breaks out" or a boom rate of industrial and population expansion slacks off into a temporary readjustment or recession, hard times hit the textile industry with double force.

Make only what you can sell!

on market potential

Plans for Adjustment?? Having made little or no effort to understand the reasons for the prosperous times when they existed, no adequate provision has ever been made by the industry as a whole for inevitable adjustments to easily foreseeable changes. Again, when difficulties do arise there is never a calm, studied appraisal of the difficulty—simply a reaction almost primitive in its lack of reason.

For instance, if you throw a rock into a group of dogs, the one that's hit immediately bites the dog nearest him. In the present case, everyone turns around and bites a competitor. The results are the same in both cases and about as reasonable and productive in one as in the other.

In the early days of the country the textile industry and the shipping industry were neighbors up in New England. It's odd that the former didn't learn one operating principle from the latter. The boat captain who kept ordering more sail as the wind freshened would, if he survived, have been put away in a quiet place, yet the adding of more sail in the way of production rates has historically been the reaction of the textile industry to stormy times.

For this to happen once or twice might be excused as an experimental notion no matter how unreasonable. To have it repeated over and over again in the face of known consequences is incredible.

Industry is Slave of Machinery. Basic in all these difficulties is one obvious fact, and that is that the textile industry has been and, to a considerable degree, still is the slave rather than the master of its own production machinery.

There are few parallels for this situation in other branches of industry. To find any close parallel a person must turn to agriculture. With no adequate information to guide him, the American farmer historically just planted his hundred acres in corn, or whatever he had been planting, and hoped that somehow someone would pay him enough money to pay for the work and trouble. This resulted in periodic times of almost universal bankruptcy.

The farmer, however, had more to excuse him than the textile man usually does. He, at least, had to make one decision far ahead of the fact and was stuck with it from then on, regardless.

As things get darker in the textile field the usual reaction has been to put in more and more acreage—to keep the production up at all costs, all the while knowing that that very production is going to increase the depth of the decline and put off by that much the possibilities of a return to profitable operations.

Why Mills Sell at Loss. When you find mills going full blast grinding out goods which are actually intended to be sold at a loss and you inquire of management as to why this is being done, the answers seldom have anything to do with usual business considerations. It is being done to "maintain our position in the market," it is being done because the community relies on the mills being in operation, it is being done to "show a competitor."

It is being done for almost any reason you can name except for the reasons on which business usually exists, namely to make a profit.

Of course, there is hope that the decision will prove profitable—and occasionally it does.

Occasionally someone makes a killing at the races. It is a sad situation, nevertheless, when a whole industry has to depend on good luck rather than good sense for the maintenance of adequate profits.

In such a situation even vast improvements in

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Basic material used for the LUNCOR Valve is polyvinyl chloride (PVC), which resists most industrial chemicals. It is recommended for service at pressures up to 125 psi and temperatures up to 140°F.

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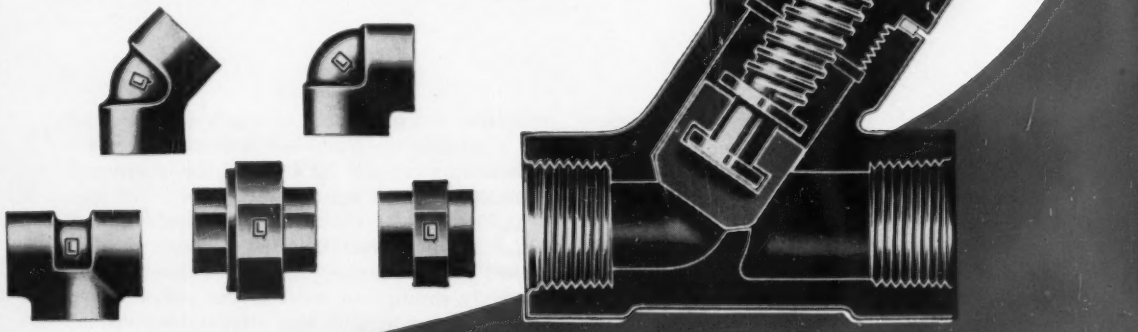

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Graduated 10-Year Terms on Textile Machines

An industrial financing firm has recently announced a new financing program for textile machinery—a plan which will feature 10-year instalment terms geared to match the new, faster depreciation schedules.

The "Pay-As-You-Depreciate" plan was first offered by C.I.T. Corporation late last year but at that time applied only to machine tools, construction equipment, and lift trucks. Wide interest in the textile machinery field, however, was said to have prompted the firm to expand the plan.

"The new tax law, one of the most important measures ever passed by Congress, gives mill owners a powerful incentive to modernize," said Sydney D. Maddock, C.I.T. Corporation president. "This new method of instalment financing gives them the perfect way to purchase equipment and depreciate it under the faster schedules. We feel it is the most important development ever made in industrial financing."

Under its new plan, C.I.T. has doubled its former five-year maximum on terms and tailored payments to the so-called sum-of-the-digits method of depreciating equipment. Purchasers, therefore, can acquire equipment and use depreciation reserves for the payments in a way they could not do previously.

The finance charge will be 4.25 per cent multiplied by the number of years of the term of the contract and applied to the original unpaid balance of the cost of the machinery. Down-payments will be flexible and tailored to the needs of purchasers, Mr. Maddock said.

How to Control Electrical Accidents

By Harold E. Vann
Safety Engineer
General Electric Co.

Electrical hazards exist to some degree in all modern industrial plants. Controlling these hazards is especially important since the probability of such accidents being fatal is greater than from any other type of accident. There are five basic steps that can be taken to control electrical hazards in industrial plants.

The first step is to define electrical safety as including not only the protection of personnel, but also equipment, materials, and processes.

This is important. Such a definition will enable better understanding of the nature and scope of the safety job and will justify effort and expenditures in providing safety protection that may be difficult to justify on personnel safety alone.

The second step is to provide management with assurance that this is the best way to realize a return on the investment in safety.

It is extremely difficult to justify expenditures for any function in a highly competitive business unless management is convinced that it is necessary and that it will bring a reasonable return. This return does not have to be in

machinery and in manufacturing processes bring no adequate relief. In fact, more often than not the contrary is true. If every unit coming off the line is to be sold at a loss, the more units the greater the loss.

In the industry and among its observers there is a considerable amount of pessimism concerning the possibilities of improvement or change in this monotonous cycle of feast and famine. It is said that there have been and are very smart men operating in the field and that if they haven't found a cure, a cure probably cannot be found.

Such pessimism is not warranted by the facts. In all probability the real basis of the continued backwardness of the textile industry as a whole lies in the fact that up to now improvement hasn't actually been necessary. Up to now the time lag between industrial depression and prosperity has been short enough to make it possible for individual companies to survive the hard times.

It has often been the case that by the time management had braced itself to actually face the facts, circumstances changed and the need for a sensible readjustment of thinking became unnecessary or at least could be postponed without threat of immediate disaster.

The reason for these relatively rapid swings is found in the fact that the domestic market served by the industry has been expanding explosively throughout most of the period. Even when overproduction was rife and conditions were nearly intolerable, the market itself (either through immigration or natural increase) was building up to take the production.

Add to this the periodic wars and other abnormal situations and a company facing bankruptcy one day would look very smart the next. Thus the decision has been postponed and the industry left behind in the management advancements characteristic of the majority of the country's manufacturing group.

From now on no such rapid increase in market can be expected.

Operating without Market Plans. From now on any industry in the United States which op-

direct dollars. It can be a return measured in better acceptance of leadership and assurance that the protection is the best practical way to do the job and will result in fewer accidents.

The third step is to establish a set of equipment specifications to be used in the installation of new equipment and modification of existing equipment.

The specifications should make sure that:

1. Exposed electrical parts are eliminated wherever possible; and

2. The equipment meets engineering performance requirements.

The fourth step is to provide a set of safe operating procedures.

In many cases equipment in itself cannot be made completely hazard proof. It therefore becomes necessary to establish safe operating procedures.

For example, it is sometimes necessary for maintenance personnel to work on equipment that if energized would subject them to serious injury. A tagging procedure would restrict the operation of the equipment.

Many times faulty equipment causes accidents. A regularly scheduled maintenance procedure should be established to repair worn or damaged equipment and replace obsolete equipment.

A procedure should be established so that the safety engineer reviews all incoming or relocated equipment to be sure that there are no obvious or hidden safety hazards.

The fifth step is to provide adequate safety training to all employees.

Adequate equipment and correct procedures will be a big part of the overall electrical safety job. However, it is also necessary to develop in workers a safety alertness to electrical hazards in the plant.

This safety training can best be done through individualized training. Each supervisor must of necessity combine safety instructions with job instructions.

All employees should have a knowledge of the hazard of making contact with electric current carrying parts. The effects of electric current on the human body have been fairly well established. It is generally conceded that approximately 100 milliamps through the human body will result in instant death. This indicates that the so-called low voltages (under 600 volts, 60 cycles) can be lethal as they will produce currents in excess of 100 milliamps under most conditions. Actually 220 and 440 volts are the work horses of industry. They deserve considerable respect because the likelihood of exposure to low voltage is generally much greater than to the high voltage.

Employee training should also include what to do in case an accident occurs. An employee should know how to (1) remove the power from the circuit; (2) provide artificial respiration; (3) give directions to the dispensary. These instructions may save a life.

In following through on these five steps you will:

1. Fulfill the moral obligation that management has to provide a safe working environment for its employees;

2. Obtain a sound return on every dollar invested; and

3. Obtain better acceptance of your leadership.

The price for these benefits is hard work, ingenuity, and adequate training. The magnitude and complexity of the job offers a strong challenge to those who are fortunate enough to be entrusted with providing safety for their fellow workers.

Extract from paper presented during the 42nd National Safety Congress.

erates without market plans and converts marketable raw materials and money into unmarketable manufactured goods for dead storage will find itself in for too many famines and too few feasts. Thus management, whether it likes or not, will be forced to face the facts and to reorganize its thinking and its operating plans accordingly.

The management that does not or cannot will simply cease to be management, and the job will have to be turned over to more energetic or competent hands.

That this will be accomplished largely by existing management there is little reason to doubt, because we can assume that it has been lack of hard necessity rather than lack of intelligence which has maintained the current operating attitudes. None of the excuses now used are recognized even by textile men themselves as having any real validity:

Admitting that full operation is more economical than half or quarter operation, full operation is not necessarily a more profitable operation;

Admitting that machinery is expensive and must be amortized, it obviously is not being amortized while it is producing something which cannot be sold at a profit;

A large mill in a small town has community responsibilities but these are not discharged by allowing the mill to become bankrupt.

If the problem were new and unprecedented in the country, there might be less reason for confidence in its eventual solution. But it is not new and it is not unprecedented. If its solution was possible in other industries, it is possible in textiles. And the path to follow is clear.

It should always be remembered that all industries have expensive machinery, all industries have a problem of industrial relations, nearly all industries are competitive. Nearly all industries are substantially the same, descriptively, as the textile industries, yet most industries have gone a long way ahead in developing a rational and reasonable schedule of production based on an understanding of their market potential.

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Economically produced with Pfister's Naphthol AS-ITR, this fashion-right pink is in eager demand for fast-selling merchandise. Get sample and formula from Pfister—now!

Pfister Chemical Works INC.

Ridgefield, N. J.

Suggestions for Reducing Pilling and Fuzzing of Spun Fabrics Containing Dacron

Concentrated research and investigation on the control of pilling of spun fabrics containing Dacron has been continued by Du Pont, and in the area of finishing treatments, strong evidence based on laboratory pill testing has been obtained that high temperature setting, particularly when combined with brushing or sanding, is an effective treatment which will reduce pilling. A comprehensive wear test program is underway but substantiation of laboratory data will not be possible until later.

However, since laboratory and preliminary wear test data are so decidedly encouraging, a Preliminary Bulletin CSB-D-35 has been issued to supply to the trade this new information. It will be supplemented when complete wear test data become available.

Following is some of the information contained in the bulletin:

Finishing work has demonstrated that factors which can be used to produce pill-resistant fabrics of "Dacron" are high temperature heating, wire brushing or sanding, shearing, and singeing. These steps augment proper yarn and fabric construction, and some or all may be applied on equipment available in most dyeing and finishing operations.

Brushing, Heating Treatments. A significant improvement in pill resistance has been achieved by following a brushing operation with an open-width, high-temperature heat relaxation within the finishing sequences. Experiments showed that high temperature heating is especially effective and on critical fabrics the combination of brushing and heating produced better results.

Brushing/Shearing. For adequate pill control, it is essential that spun fabrics be closely brush-sheared by multiple passes on a properly adjusted machine with well maintained brushes and knives in order to remove the long fiber ends.

Singeing. Singeing is a very important single finishing operation which reduces pilling. A deep, thorough, evenly applied singe, preferably two flame exposures, is often necessary to achieve good pill resistance. Where possible, the shearing step should precede the singeing operation in order to eliminate a harsh, grainy fabric caused by large, melted fiber tips.

The recommended general procedure is to incorporate these basic finishing steps into a process considered optimum for attaining the specific requirements of a given fabric. This involves selecting the proper settings for the equipment available to the finisher. The results should be checked by pill test and all or part of the sequence repeated until conditions for satisfactory pill resistance are obtained. Finally, wear tests must be conducted to prove that the fabric is satisfactory.

Details of Brushing. Several brushing machines and standard brush-sanding machines have been used to achieve surface fiber raising or distortion, with the brushing followed by heating. The resulting improved pill test results were broadly equivalent for each of these machines that were used. There are indications that the modified "tiger" described in the next paragraph may ultimately be more nearly optimum.

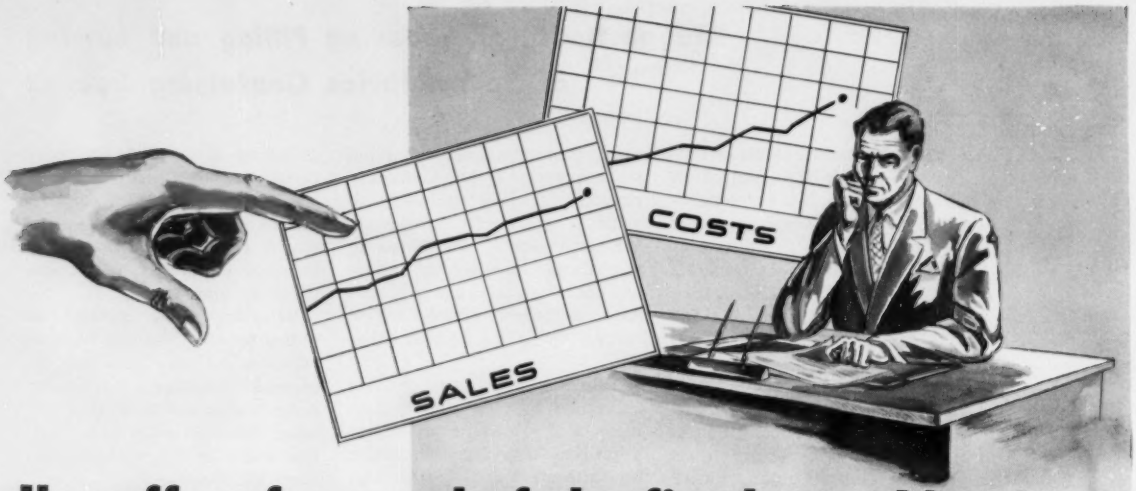
A brushing operation that in preliminary work has been effective makes use of a high-speed rotary wire brush that rotates in opposition to the direction of fabric travel. The most satisfactory brush has been a cylinder 15 inches in diameter with peripheral speed approximately 60 times faster than the fabric speed. The bristles of this brush were formed from fancy card roll clothing, 36 gauge straight wire, 18 noggs, 4 twill. The brush was so ground that a smooth heel-to-toe polishing action, rather than a plucking action, was obtained by the motion of the brush against the fabric. No large-scale raising of individual fibers resulted from this high-speed brushing technique. The polishing action of the wire brush, together with the frictional heat developed, contorts the exposed surface filaments which, it is believed, may then be more efficiently locked into place by heat setting.

Brushing with natural or nylon bristles has not been as effective as wire brushing. In several instances, however, some resistance to pilling has been obtained with such bristles when used in a high-speed brushing operation.

Details of Heat Treatment. A significant measure of protection is afforded by fabric heat treatment alone. However, the combined brush/heat treatment has been more effective than heat treatment probably because fibers distorted by brushing are more easily locked into the fabric. Optimum heat treatment conditions vary from fabric to fabric but, in general, the highest possible temperatures should be used. Exposures of 30 to 60 seconds varying from 390 F down to 350 F (when sublimation is a concern) have been most effective.

Best results are obtained with shrinkages allowed in both warp and filling directions. Three to seven per cent allowances have been effective. For the above conditions, an overfeed pin tenter has proved satisfactory. At present, various other types of heat setting equipment are under study. It is essential that uniform temperature control from side to side and at the selvage be maintained to avoid dye differences and shading.

The use of this procedure on grey fabric permits utilization of greater fabric shrinkage without harshening handle. As noted, where the combination of brushing and heat treating is to be used, the heat treating should follow the brushing. However, this combination can be used after scouring or dyeing, or prior to final shearing. Heat treatment after dyeing demands close attention to proper selection of dyestuffs and heat setting conditions to avoid sublimation difficulties.



He suffers from end of the fiscal year blues!

ANOTHER YEAR HAS PASSED — COSTS HAVE INCREASED, PROFITS HAVE DECREASED.

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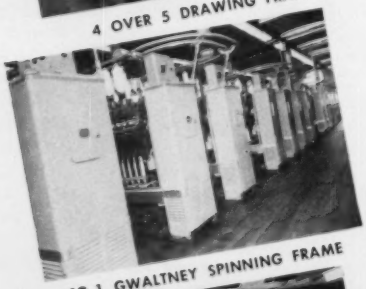
4 OVER 5 DRAWING FRAME

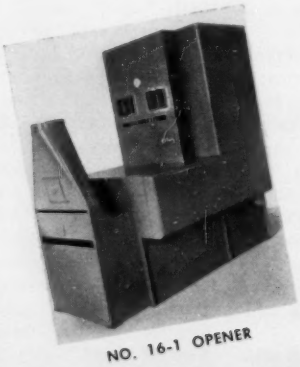
Mills all over the world have found that Saco-Lowellizing is the answer for bettering their operations and increasing profits. Specifically, the Saco-Lowellizing program helps you make better use of floor space, thereby improving production flow; it co-ordinates the successive steps in processing; reduces waste, spoilage and unnecessary handling of stock; and, helps you realize the greatest economies in operating and maintenance cost.

To obtain a full Saco-Lowellizing Plan for your mill, call the nearest Saco-Lowell Office and arrange for one of our engineers to prepare a "Forecast of Savings."

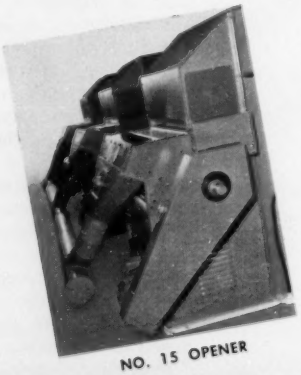


SG-1 GWALTNEY SPINNING FRAME

FS-2 ROVING FRAME



NO. 16-1 OPENER



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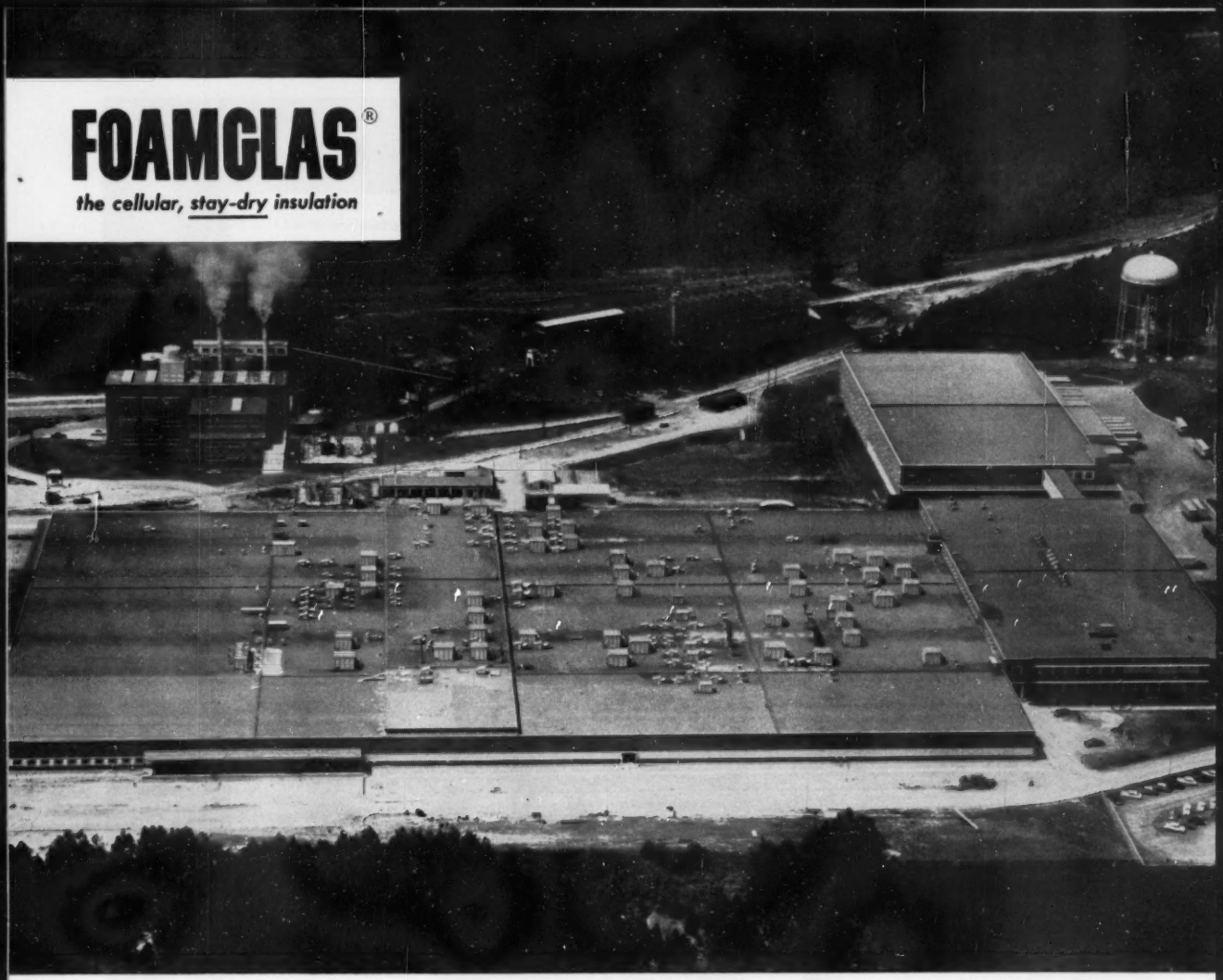

Airview of Grace Bleachery, the world's largest . . . recently enlarged by The Springs Cotton Mills at Grace, S.C. *Engineers and Architects:* Robert & Co. Associates, Inc., Atlanta, Ga.; *Roofers:* Ingold Company, Inc., Hickory, N.C. and Arvett & Ledbetter Roofing and Heating Co., Charlotte, N.C.

On Springs Cotton Mills' 16-acre bleachery roof FOAMGLAS insulates effectively because it stays dry

On this 16-acre roof of their Grace Bleachery, The Springs Cotton Mills has found that FOAMGLAS insulates effectively because it can't absorb moisture and lose insulating efficiency.

Installed in 1947 on the original bleachery roof, FOAMGLAS has effectively kept down condensation on the roof slab and conserved heat in the winter. Seven years later it was picked again to insulate the roof of a major addition to this bleachery, the largest in the world.

This unique cellular glass insulation has been used extensively by the Springs Mills in other ways . . . on 350° steam lines . . . in cold storage spaces . . . and on 20 additional acres of mill roofs including one in Lancaster, S.C. covering more looms (7,500) than any other roof in the world.

It will pay *you* to get the full story on the use of FOAMGLAS for buildings, cold storage space, piping, or tanks and equipment. Please write today for a sample and literature indicating your specific interest.

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There's no end to the profitable combinations of fabrics and functions Cyana finishes offer you. In the last five years we created over 10,000 **individual** finishes to meet our customers' special needs. Our vast research and manufacturing facilities—plus personnel with the **training, imagination and will to find the right answer**—all work together to help solve your specific problem. Working together, we may find just the right finish to help sell your merchandise and keep it sold. Call your Cyanamid representative today.

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PRODUCERS OF THE WORLD'S FINEST TEXTILE RESINS

Georgia mill men recently answered this and several other timely questions on weaving—read this condensation of their replies

How do you clean air change ducts in the weave room?

Staff Report

HERE ARE the highlights of the weaving portion of the recent discussion meeting held by the Textile Operating Executives of Georgia in Atlanta. Report of the slashing discussion appeared in TEXTILE INDUSTRIES for January, 1955, pages 155 and 157.

McAllister Isaacs, Jr., of Bibb Mfg. Co., Columbus, Ga., conducted this phase of the program.

Cleaning Weave Room Air Change Ducts. Most of the mills responding to this question blow off the outside of weave room air change ducts with compressed air, and wipe or brush off deposits that the air does not remove. *Mill N* uses "rags, detergent, and elbow grease."

At *Mill Q*, the vent sections are taken out of the ducts every two weeks and cleaned on the inside with a whisk broom. Each fan and the inside of the fan housing is cleaned out every week. Every four months the ducts are thoroughly cleaned out on the inside.

The inside surfaces of the ducts are usually cleaned out annually with compressed air and brushes. At *Mill V* the fans are operated at low speed for cleaning; an employee crawls through the ducts with a brush to loosen the dust and lint, which are blown through ahead of him. All looms near the ducts are covered with cloth while cleaning operations are going on.

Weave Room Preventive Maintenance Schedule. One mill weaving both cottons and synthetics uses the following preventive maintenance schedule:

1. Preventive maintenance by loom fixers. The loom fixer on each shift has a permanent assignment of ⅓ of the looms on his layout for maintenance work. This work is scheduled as follows:

Daily: inspect cloth and operation of loom on filling change.

Weekly: check shuttles, leather,

MILL D
REPORT OF SHUTTLE PUT IN

A new shuttle was put in
Loom..... on .....19.....
I have checked the following:

1. Shuttle is boxed correctly.....
2. Loom is properly lined.....
3. Protector rods and bearings are not worn badly and they have no play or backlash.....
4. Protector rod fingers are set correctly against binders and daggers clear frogs the proper amount.....
5. Frog rubber is in good condition and dagger is set correctly .....
6. Shuttle feeler set correctly.....
7. Loom is changing filling correctly and change parts are not worn badly .....
8. Pickers are parallel and in good shape.....
9. Binders and box leather are in good condition.....
10. Rocker shaft bearings and bushings are not worn.....
11. Pitman arms are in good shape and eccentric pins are tight.....
12. Loom picks correctly and stroke on picker stick is correct; heel springs are good.....
13. Shuttle is not cut anywhere.....

Fixer.....
Date..... Checked by.....

WEAVE ROOM HUMIDIFIER MAINTENANCE SCHEDULE MILL E*

Daily

Check temperature and relative humidity.

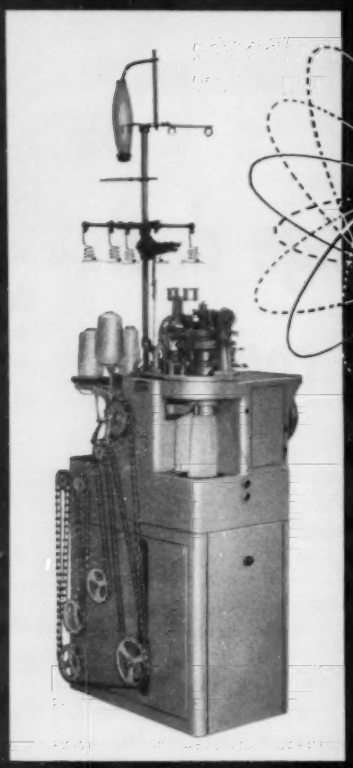
Weekly

Calibrate humidity and temperature recorder.
Clean "Master-B" control boxes.
Check air valves.
Check water valves.

Serviced by Shop

Check humidifier pump motor.
Service recorders and control boxes as necessary.

*One man carries out maintenance schedule and makes minor repairs; major repairs are handled by the shop.



NOW 400 NEEDLE SEAMLESS STOCKINGS AT THE PUSH OF A BUTTON!

. . . WITH THE *NEW* FIDELITY "400"

The FIRST completely new development in high-speed circular knit hosiery equipment in over thirty-five years!

- Electronically controlled with approved General Electric THY-MO-TROL.
- Push button operation.
- Accepted and approved by leading hosiery mills.
- Individual motor eliminates line shaft.

The ONLY electronically controlled machine to produce 400 needle seam-free ladies' hosiery.

Leading hosiery mills are setting new standards for production—and profits—with this revolutionary high-speed knitter. See it in operation at our showrooms . . . or visit with us at the Knitting Art Exposition in Atlantic City.

Designers and Builders of Intricate, Automatic Precision Machines

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binders, and pickers on Monday and Tuesday; crank arms, lay guides, and filling forks on Wednesday; swords, rocker shafts, and parallel blocks on Friday; harnesses on Saturday.

2. Periodic inspection by supervisor.

3. Shuttle installation procedure.

a. Fixer aligns loom and leaves straight edges on loom.

b. Checks and tightens loom.

c. Fixer notifies supervisor.

d. Supervisor dates shuttle, issues shuttle and check sheet.

e. Supervisor goes to loom and checks alignment.

f. Fixer completes items on check sheet.

g. Fixer starts loom and turns in completed check to supervisor.

h. Follow-up by supervisor.

If a shuttle installation is not completed by the end of the shift, the check sheet is turned in to the supervisor and is reissued on the next shift.

New Wool Production Record Set

In a survey of the world wool situation, the "Textile Organon" notes that world production for the 1954-1955 season is estimated at 4,430,000,000 pounds, greasy basis, 2% above 1953-1954 and a new record. The clean equivalent of this figure is given as 2,575,000,000 pounds. The 2,575,000,000 pounds clean basis output was composed of 2,090,000,000 pounds of apparel wool and 485,000,000 pounds of non-apparel types.

The Organon notes that in a twenty-year recording of wool production, there has been a season-to-season variation of more than 100,000,000 pounds in only nine years. Associated with this stability in production is the equally notable steadiness in the relative importance of the various producing countries, the only exception being the United States, where wool production has tended steadily downward.

Australia's share of the world total in the latest season is 29% compared with 27% in 1935-1936, while New Zealand's ratio is 10% compared with 9% twenty years ago. U. S. output is about 36% below prewar.

DISCUSSION TOPIC is clarified by **E. J. Hertwig,** Bibb Mfg. Co., Columbus, Ga.

Telescoping Cloth. In answer to the question, "What do you do to prevent telescoping of cloth as cloth roll diameter builds up on looms?" *Mill F* presented the following list of causes which should be checked:

1. Cloth not started right on cloth roll.
2. Weak cloth traverse springs.
3. One end of cloth roll going up ahead of the other.
4. Teeth broken on cloth traverse rack or spring shaft gear.
5. Spring shaft bent or binding.
6. Worn cloth roll block.
7. Badly worn fillet on take-up roll.
8. Take-up roll not set level.
9. Slack woven cloth.
10. Bent or sprung cloth roll.

CHECK THESE SOURCES OF KINKY FILLING

Shuttles bristled and furred properly?
Lay timed correctly?
Cushion of waste in front binder under battery?
Pickers burst or worn out?
Wooden binders badly scarred or worn out?
Quills in straight line in shuttles?
Shuttle springs and eyes tight?
Pick properly set?
Shuttle boxed correctly?
Filling conditioned?
Harnesses timed and set properly?
Power as low as possible?
Excess twist in filling?
Harness shed too high off race plate?
Rod lock hook loose on harness?
Protection rod bearings worn?
Filling heavy?

TRY THESE TIPS TO PREVENT JERKED-IN FILLING

Set feelers as recommended by loom manufacturer.
Put waste cushion in right front box plate.
See that shuttles and boxes are smooth.
Clean thread cutter each shift.
See that thread cutters are in good condition, blades sharp, and timed correctly.
Keep shuttles boxed properly.
Check that binder leather is in good condition.
Keep shuttles bristled and grooved properly.
Check for bent filling fork tines.
Keep pickers parallel.
Drill a hole in battery side of front binder, just behind shuttle eye, and insert cushion of warp yarn.
Check harness setting and timing.

NEW OFFICERS OF THE TEXTILE OPERATING EXECUTIVES OF GEORGIA

General Chairman—E. A. Bentley, Swift Manufacturing Co., Columbus, Ga.
Vice General Chairman—J. A. Fife, Scottdale (Ga.) Mills.
Secretary-Treasurer — H. A. Dickert, A. French Textile School, Atlanta, Ga.
New Members, Executive Committee (2½ Years)—
C. C. Cobb, Riegel Textile Corp., Trion, Ga.
G. D. Malone, Exposition Cotton Mills, Atlanta, Ga.

25 years from now the typical textile plant may be an entirely different sort of thing inside from what it is today

THE MEASURE OF PROGRESS

By Ringgold Arden

EXCLUSIVE

A RECENT Associated Press dispatch called attention to a Government release indicating that the standard of living in the United States has improved 100 per cent in the past 25 years. This is in line with what economists have counted on for many years, since statistics indicate that the real income of the American people has been increasing at a fairly steady rate of three per cent a year for more than 50 years, during which fairly reliable statistics have been compiled.

At the rate of three per cent a year, a principal amount will double in about twenty-three and one-half years, so we may therefore expect the living standard in this country to double again within the next 25 years unless the springs of invention dry up.

The fact that our standard of living has shown this steady increase for many years is no casual accident, since an accident of that sort could easily have happened to many other countries as well as the United States. There is quite evidently something about our economic system that makes this sort of steady improvement in our productive capacity possible.

The Socialists and Communists claim that our system is all wrong, and that they have a much better one, but none of them can point to a place where any economic system has produced better results than ours, regardless of how haphazard it may appear to those with a passion for regimentation.

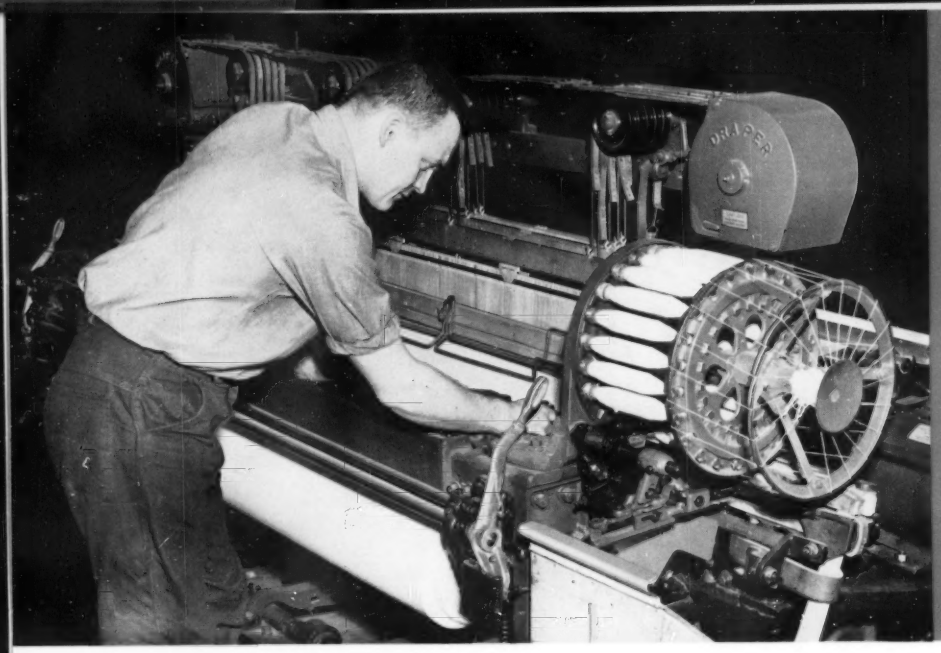
We have only to consider our own industry to see what has been happening all over the country. During the past 25 years, a tremendous number of new, and better, and cheaper ways of doing things have been put into use in textile mills:

Twenty-five years ago, practically all cotton mills in the United States had two- or three-process picking, and in a great many of these mills there was an opening system which delivered cotton to a series of storage bins behind the pickers. Such an arrangement required a man in the opening room and a man to feed cotton from the bins to the breaker pickers, in addition to the men needed for doffing breaker, intermediate, and finisher pickers, and putting up laps on the aprons of the intermediates and finishers.

A typical mill with four breakers, four intermediates, and five finishers, would have needed six, or possibly seven men to keep this picker room in operation. Single-process picking with automatic distributors and controls would cut this down to two men, since one would be needed in the opening room and one in the picker room.

Twenty-five years ago, the cotton mills were just beginning to seriously consider long draft equipment for the roving and spinning departments. A mill on medium counts would normally have three processes of roving frames, and on fine counts there would usually be four processes of roving, and some very fine mills might have five. Making fine roving is an expensive proposition and the elimination of great numbers of roving frames might cut the labor force to one-half or one-fourth of what it had been.

Twenty-five years ago, three processes of drawing were not unusual, and at least two were al-

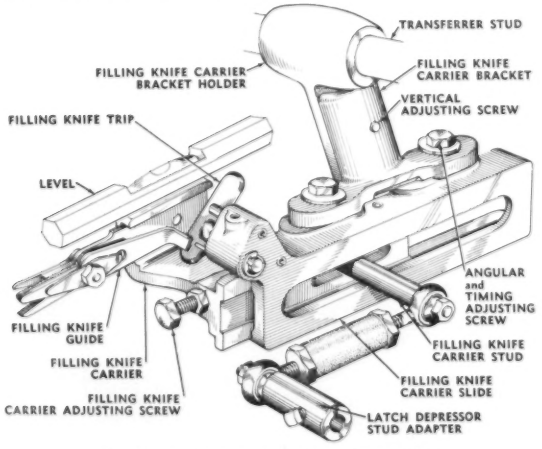


No. 1 of a Series

DRAPER LOOM FIXING

Setting Instructions For No. 25 Draper Thread Cutter*

Maximum loom production and efficiency are of prime importance to the successful operation of your mill. Only by standardized settings, **used by all loomfixers,** can these results be realized.



Thread Cutter illustrated in above position for ease of parts identification.

INSTRUCTIONS FOR SETTING

With Filling Feeler Indicating for transfer, pick Shuttle to R. H. Box.

Apply assembled Thread Cutter to Transferrer Stud, and bring Lay forward until Bunter is ⅛″ from Latch Finger.

Position Thread Cutter so that knives are centrally located lengthwise in Thread Cutter slot in shuttle. Level knives by placing level on top edge of Filling Knife Carrier. This locates Filling Knife Carrier Slide about 4½° from horizontal. Tighten screws on Filling Knife Carrier Bracket Holder on Transferrer Stud.

Loosen Vertical Adjusting Screw, and position Filling Knife (Lower) slightly above lower edge of slot in shuttle and bottom of Front Box Plate opening. Tighten Vertical Adjusting Screw.

Set Filling Knives to project ¼″ through Front Box Plate opening with Filling Knife Carrier Adjusting Screw head bearing against lower edge of Front Box Plate. Secure Filling Knife Carrier Adjusting Screw with check nut.

Assemble Latch Depressor Stud Adapter to Latch Depressor Stud — also Filling Knife Carrier Stud to Filling Knife Carrier (do not tighten either). With Latch and Bunter still ⅛″ apart, position Carrier so that Carrier Adjusting Screw touches bottom edge of Front Box Plate. Tighten nut on Filling Knife Carrier Stud.

Operate Transferrer by hand. The Filling Knives should be closed before bobbin is pushed out of the shuttle. To make this setting, loosen Angular and Time Adjusting Screws and position slide for proper relationship of Filling Knife Trip and Filling Knife Guide (Steel). Tighten Screws. Check position of Filling Knife Carrier Stud in slot, and adjust Carrier Assembly to Latch Depressor Stud so that all parts move freely; then tighten set screw in Adapter.

Lubricate all moving parts **sparingly.**

* *Condensed version.*

DRAPER CORPORATION

Advertising Department (T. I.)
Hopedale, Massachusetts

Please send complete Setting Instructions for #25 Draper Thread Cutter.

Name _____

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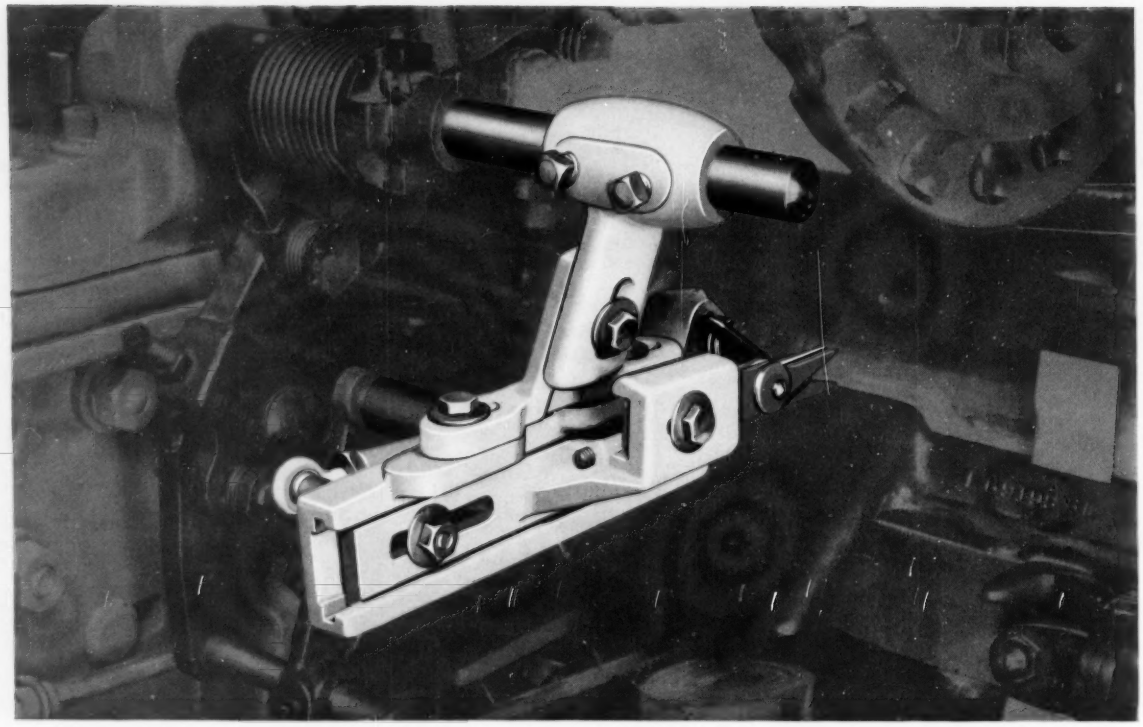
Company _____

Address _____



NEW #25 DRAPER THREAD CUTTER* FOR X-SERIES AND E MODEL LOOMS

features simplified construction with full range of adjustments

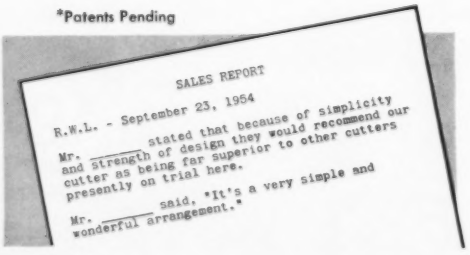
Here are the reasons why the New #25 Draper Thread Cutter is the best cutter for your looms.

- Maintenance costs are reduced with *20 fewer parts used in assembly.*
- It is easily applied without changing existing parts on the loom.
- Settings are easier to make — easier to maintain.
- The danger of drag-ins is greatly reduced.

Mill Trials prove that this simplified Thread Cutter, with its full range of adjustments, increases production and lowers costs.

Filling Knife Assembly cuts and holds better on yarns ranging from 15 denier monofilament nylon to 4's cotton flannel napping.

*Patents Pending



SALES REPORT

R.W.L. - September 23, 1954

Mr. _____ stated that because of simplicity and strength of design they would recommend our cutter as being far superior to other cutters presently on trial here.

Mr. _____ said, "It's a very simple and wonderful arrangement."

DRAPER CORPORATION

HOPEDALE, MASS.

ATLANTA, GA.
GREENSBORO N. C.
SPARTANBURG, S. C.

most universal. It is doubtful if many, or any, mills are running three processes of drawing today, and many that used to run two processes are now getting along very well with one.

Twenty-five years ago, a 12″ can for cards and drawing frames was considered quite large, and thousands of cards had 10″ cans and some, 9″ cans. The cans are now not only bigger, but longer, and will often hold two or three times as much sliver as the cans they replaced.

While we have no statistics immediately at hand, it is probably a fair guess that a modern spinning frame will on the average produce twice as much yarn per spindle per doff as the frames generally in use 25 years ago. This not only cuts doffing and spinning costs, but reduces the number of knots in the yarn and cuts winding or rewinding costs.

Within the past few years the practice of rewinding filling has been very considerably extended. Rewinding will put about 40 per cent more yarn on a quill, under more uniform tension, and the yarn will have been partially cleaned, and inspected for slubs, bunches, or other bad places that ought to be broken out.

Twenty-five years ago, air conditioning in textile mills was in its infancy, while now large numbers of mills can maintain the desired operating conditions in almost any kind of weather. This makes for better running work and more efficient operatives.

Twenty-five years ago, the dryers in cotton and woolen mills had low capacities and were wasteful of steam and required hours to clean. The modern dryers are more efficient, and are easier to clean, so that it is not unusual for one modern dryer to replace three or four of the old-timers. At the same time, most dye houses and bleacheries have thrown out the old cast iron kiers or kettles, and put in stainless steel equipment, which permits the holding of more uniform shades.

Twenty-five years ago, a mill dyeing raw stock, either cotton or wool, would blow this into bins, and a small army of men was often required to make the stock and color blends required by the cards. Most plants handling raw stock dyeing and blending now have extremely efficient mechanical blending systems. A plant with a gang of 25 or 30 men, which handled stock by the armful in bins, and painfully blended it, an armful at a time, can now blend and bale the same amount of stock with about four men, and can store three or four times as much stock in the bales as could formerly be carried in the bins. Money has therefore been saved both on labor and floor space.

The cotton and synthetic rug industry has had practically all of its development during the past 25 years, and modern machines can turn these rugs out with perhaps one-tenth or one-twentieth of the time and labor required when making a similar type rug 25 years ago.

The great development in synthetic fibers has been made during the past 25 years. Prior to that time, a considerable amount of rayon was being produced, but the great number of fibers which are popular today were not in existence. These fibers are sometimes merely supplanting cotton or wool, but in some instances they are probably creating entirely new fabric possibilities, because a person who can not afford a suit made out of ten-dollar fabric might buy two or three suits made out of a two-dollar fabric.

These are a few of the more notable changes in textile manufacturing that come to mind, but there are literally dozens, or hundreds, of things that might be catalogued as contributing to lower costs and greater manufacturing efficiency. Things like fluorescent lighting; frame and ceiling cleaners; automatic distributing systems; motorized trucks for moving materials; pneumatic pick-ups for spinning frames; larger packages on winders and automatic spoolers; bigger beams on looms and warpers—the list could be extended tremendously and we have mentioned only a few.

Each generation has a tendency to feel that most of the possible progress has been made. A smart textile mill manager in 1929 could feel that his mill was equipped with all of the latest and best devices for making good yarn and cloth economically, and he might have been somewhat shocked if told that his mill would very shortly be obsolete and ready to lead him straight to the poorhouse.

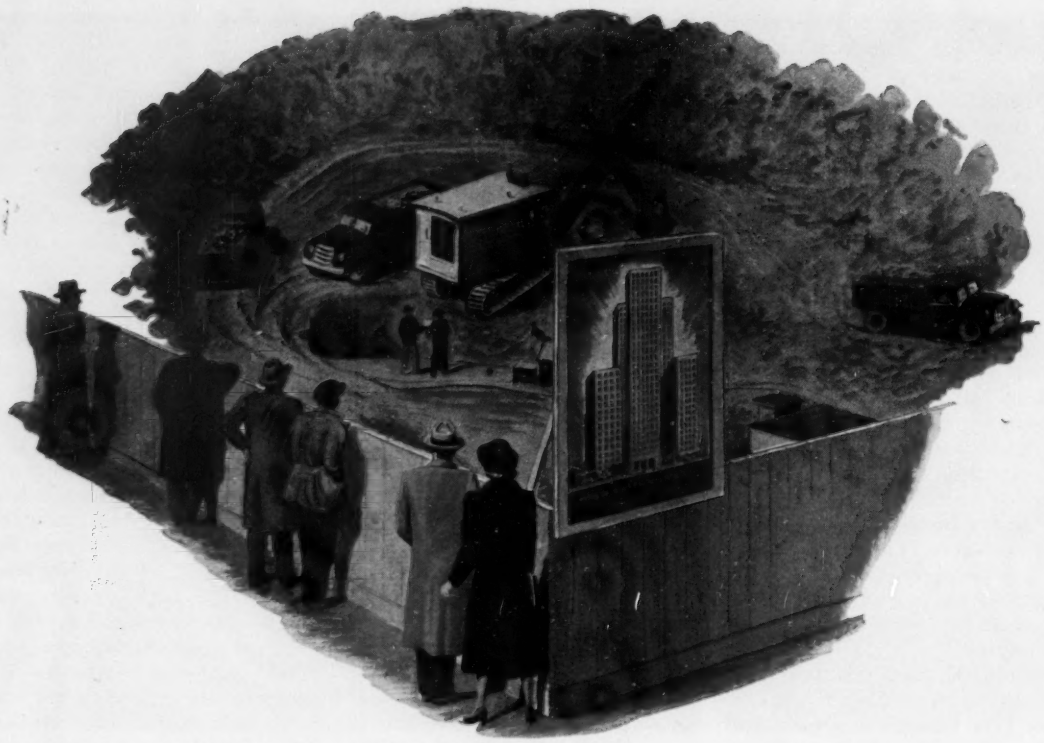
Just what the improvements of the next 25 years will be is as hard to visualize as the same problem was 25 years ago, but we can confidently hope that unless the American people run out of steam, inventors will constantly be making textile plants more and more efficient.

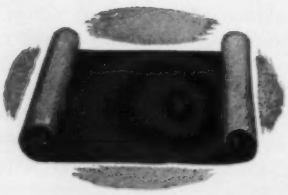
It is not unreasonable to think that 25 years from now, the typical textile plant may be an entirely different sort of thing inside from what it is today. When we have made about all the progress which is possible in one direction, invention frequently gives us a different direction in which to move.

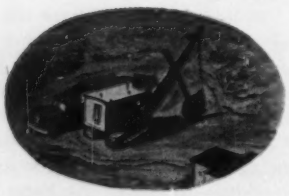
The synthetics have opened up an entirely new direction for many mills, and instead of these synthetics merely being a sideline for some cotton mill, many large plants are devoting all of their time and effort and thought to the problems of handling known synthetics, and developing better ones. Several fair-sized plants are now doing nothing but weaving glass fabric which was something totally unknown commercially 25 years ago.

Nobody can say where the paths of progress will lead, but we can say that so long as a free people are allowed to exercise their freedom of thought and ingenuity, and their right to risk their judgment in the production of new and interesting things in the hope that a profit can be made from their ingenuity, these paths of progress will continue to branch out in many directions, leading us to more comfortable, more satisfying, and perhaps better all-round lives.

There is, however, one serious catch in this interesting picture, and that is the fact that as our economy becomes more and more complicated, it becomes easier to disrupt. We are every year more and more dependent upon chains of circumstances which become ever more complicated. An explosion in a manhole can practi-







Foundation for a Fine Finish

UNLIKE MOST THINGS, a building must go deep down before it can go up!

. . . and the reason is, of course, that it's upon the *foundation* that the safety of the building's fine "finish" depends . . . a foundation planned for in advance . . . one designed to do the job *best.*

And this same "factor of safety" can be applied, with profit, in other ways. In your bleaching and dyeing operations, as an example, we know of no better way to plan for a fine finish than to use a de-sizing agent designed to do *that* job best: *Diastafor.*

For Diastafor de-sizing agent *works,* no matter what *your* working conditions—whether with various lots, with variations in water or sizing formulas—whether with cottons, rayons or mixed goods. What's more, you will find it works in an unusually wide range of temperatures and pH, a range sure to satisfy your every de-sizing need.

For finishing with ease, speed and economy in either the continuous or batch process—try all-purpose Diastafor! It's available in three types, L, L_2 or D. Remember: this is the product that has been building its fine reputation for more than 44 years!

For further information, feel free to write us . . . we're here to serve you. Standard Brands Incorporated, *Diastafor Department,* 595 Madison Avenue, New York 22, N. Y.

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cally shut down a large city, freezing its inhabitants in cold weather, and spoiling most of its food in summer.

The more complicated our economic system becomes, and the more everything becomes dependent upon something else, the more we need to be assured of world peace. Perhaps in another 25 years enough of the rest of the world will have become gadgetarian to the point where nobody will want to start a war that would certainly shut off the gadgets.

Watch These Points in Applying Crease Resistant Finishes to Cotton

By H. Y. Jennings
Dan River Mills, Inc.

Considerable argument has revolved around the question of whether there is a chemical reaction between such materials as urea formaldehyde and melamine formaldehyde, and cotton or cellulose. One group insists that the resins simply penetrate inside the fibers and polymerize, that there is no actual chemical linkage between fiber and resin.

Evidence to support this viewpoint is given by the fact that if fabrics are cured to the point of excessive weakening or embrittlement, it is only necessary to hydrolyze the resin from the fabric, the crease resistance is lost, and the original properties restored.

On the other hand, modified urea formaldehyde and other resins show a greater tendency to react with cellulose than to polymerize, and the finish is therefore permanent. This makes precise processing necessary or the goods will be ruined, since the resin is not easily removed. The situation is analogous to that of nonstrippable dyes.

Alkali Content of Prepared Goods. Most currently used crease resistant finishes require acid catalysts to cause reaction with the cotton fiber, but most of these catalysts are nearly neutral in the pad box. This is necessary to maintain stability, but the catalysts become quite acid when heated.

Alkali left in the fabric will neutralize the catalyst, so that its effectiveness is lost. For example, 0.5 per cent of an amine hydrochloride catalyst is neutralized by 0.04 per cent sodium hydroxide, so that if this amount or more of caustic soda is left in the goods the catalyst is entirely neutralized and reaction with the resin is not effective.

This is a common situation, since goods to be chemically treated are usually mercerized first and the fabric is often not nearly uniform in caustic content. Piece dyed goods also are fairly alkaline as they come from dyeing.

The goods can either be soured or extra catalyst used, but the latter is too expensive.

If pH varies from one part of the goods to another, part will be over-cured and part will have the resin inadequately fixed.

Because of the presence of phosphates or other salts with a buffering action, a pH check is not sufficient. A sample of fabric must be titrated to determine sodium hydroxide as a basis for catalyst addition.

Blending Resins. Recently, a number of new crease resistant finishes have become available. Similar to the blending of fibers with different properties, the blending of resins sometimes gives results better than obtained with either alone.

For example, polymethylol melamine gives a firm but springy hand, but yellows when bleached or when pressed at high temperatures. Dimethylolethylene urea also gives good crease resistance, but adds no body to the fabric, has a tendency to hydrolyze, and retains chlorine when washed at high temperatures.

However, a blend of these resins using 2 mols of dimethylolethylene urea with each mol of polymethylol melamine, preferably as a copolymer, produces satisfactory results. Yellowing or browning is eliminated, hand is improved, and if the material is given a "hard cure" the chlorine retention is negligible. (By a hard cure is meant the use of higher temperatures, longer times, or more catalyst than normal.)

Migration of Resin. Migration of resin within the fabric causes considerable trouble at the high speeds of commercial production. This property is most pronounced with the melamine resins. [Dr. Jennings did not consider urea formaldehyde in this part of his discussion.]

Migration is eliminated by air-drying, but this is impractical in most cases. It can be partially eliminated by reducing the temperature at the tenter frame. However, this procedure may reduce production from 120-150 to 50-80 ypm.

Infrared predrying also helps to reduce migration.

Over-Treating for Crease Resistance. The lack of thermoplasticity of the cotton fiber sets a practical limit on the extent to which it can be made crease resistant. Man-made fibers, since they normally have high thermoplasticity, can be readily creased and pressed without interfering with their crease resistance.

On the other hand, the higher the crease resistance of a cotton fabric the more difficult it is for a garment manufacturer to shape and manufacture garments.

A simple test devised at Dan River Mills tells when crease resistance is excessive. A piece of fabric 2" long by ¼" to ½" wide is folded over and a ½-lb weight put on it. After a standard length of time the weight is removed, and if the fabric opens up 15° or more it can be assumed that the cutter will have trouble.

Abstracted from a paper presented by Dr. Jennings at the Third Chemical Finishing Conference, sponsored by the National Cotton Council of America.

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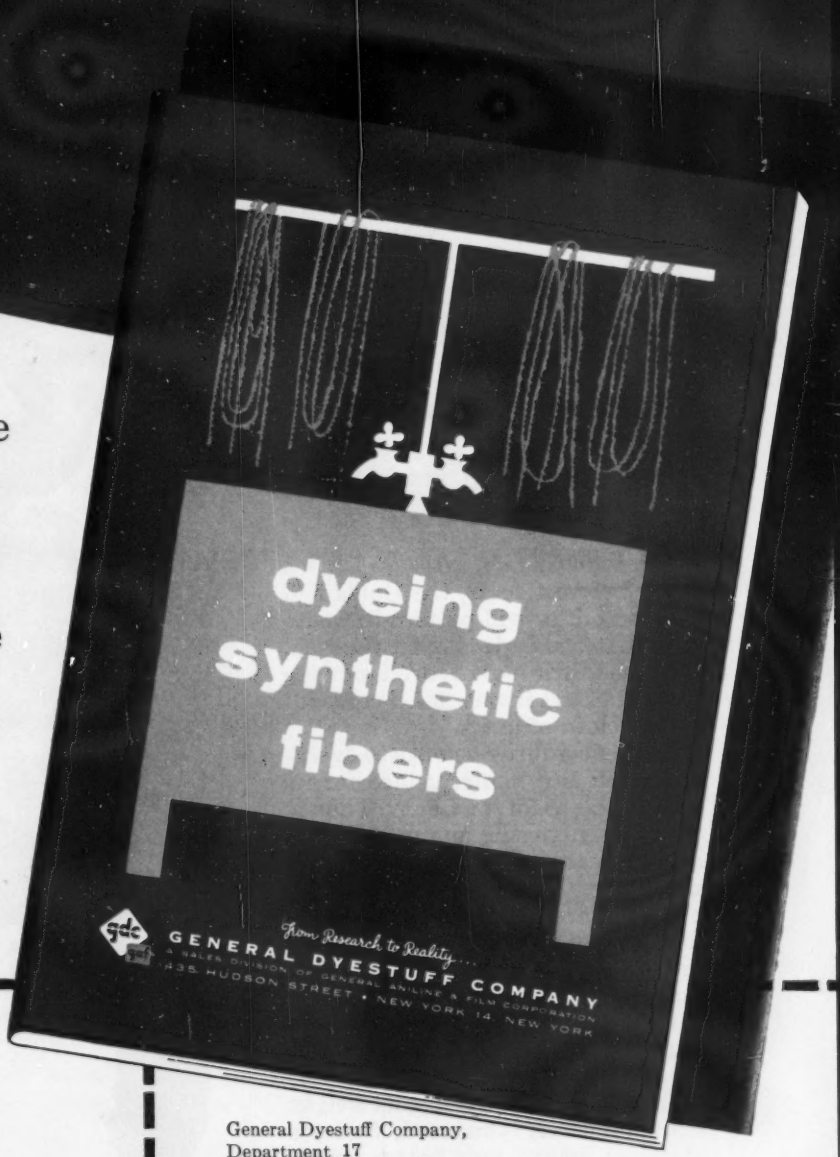
dyeing synthetic fibers
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Corduroy—Once Royalty's Favorite—Belongs to Everyone Today

Long before Caesar, the Gauls had worked out a twill pattern in weaving. Later was developed the rich, ribbed fabric so favored by the French Court it was called cord-du-roi, or cloth of kings.

Today corduroy belongs to everyone—and is as much valued for its ruggedness as for its beauty. Thanks to modern textile manufacturing methods, corduroy can be woven to meet virtually every need. Used for coats, dresses, sports clothes, draperies, upholstery material—it is an outstanding example of textile manufacturing progress.

Exactly right for today's textile requirements are Staley's sizing and finishing starches. Scientifically formulated to give you the exact weight and uniformity you need, Staley's starches insure you better, more economical results. For more information, write today.

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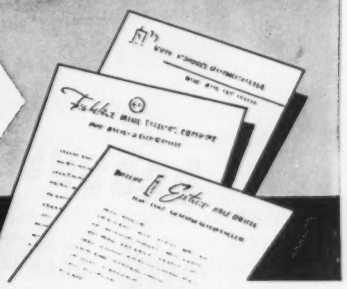


Use This Form For Quick Yarn Count Calculation

EDITOR TEXTILE INDUSTRIES:

We are sometimes swamped with numerous but similar problems posed by governmental and institutional biddings and private inquiries, which specify cloth width, sley, and picks per inch, but which leave it up to the mill to select the proper warp and filling counts.

In most cases the selection of proper yarns hinges not only on the type of fabric but also on the cost angle. It is usually more practical to consider only yarns already manufactured in the mill, rather than to plan a new line.

Thus the selection of yarn counts is preferably carried out by a responsible employee who can

DATE: _____
STYLE: _____

SELECTION OF YARN *
(WIDTH - WEIGHT - SLEY & P.P.I. GIVEN)
16 6.2 oz/sq.yd. 44 32

6.2 OZ/SQ. YD. ÷ 16 = .3875 LBS/SQ. YD. ; 1296 ÷ 16 *WIDTH = 81 "LENGTH
81 "LENGTH ÷ 36 = 2.25 YDS. LENGTH ; .3875 LBS/SQ. YD. ÷ 2.25 YDS. L. = .1722 LBS/YD LINEAR

(16 "WIDTH X 44 SLEY) + 24 SELV. ENDS = 728 WARP ENDS
1 ÷ .1722 LBS/YARDS = 5.81 YDS/LB

728 WARP ENDS X 5.81 YDS/LB X 1.05* X 1.05 CRIMP = 4663.68 YDS. WARP/LB CLOTH
16 "WIDTH X 32 P.P.I. X 5.81 YDS/LB X 1.11 WEFT CRIMP = 3301.94 YDS WEFT/LB CLOTH
7965.62 YDS./LB. CLOTH

7965.62 YDS/LB CLOTH ÷ 840 = 9.48 (10/1) *HANKS/LB OR WARP YARN*

4663.68 YDS. WARP/LB. CLOTH / 840 X 10 WARP YARN* = .55520 LBS WARP/LB CLOTH

1 - .55520 LBS WARP/LB CLOTH = .44480 LBS. WEFT/LB CLOTH

3301.94 YDS WEFT/LB. CLOTH / 840 X .4448 LBS. WEFT/LB. CLOTH = 3.84/1 *YARN WEFT

ALTERNATIVE

14/1 *YARN WARP ASSUMED

4663.68 YDS. WARP/LB. CLOTH / 840 X 14 WARP YARN* = .39657 LBS WARP/LB. CLOTH

1 - .39657 LBS. WARP/LB. CLOTH = .60343 LBS. WEFT/LB. CLOTH

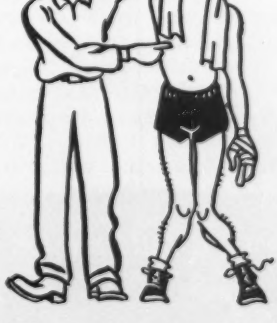
3301.94 YDS WEFT/LB. CLOTH / 840 X .60343 LBS. WEFT/LB. CLOTH = 6.51/1 *YARN WEFT

*DO NOT USE 1.05 SIZE WHEN FINISHED CLOTH

THE WINNER!

Winner of TI's recent Kink Contest was **Osbert Hughes** of Virginia. Mr. Hughes' winning entry will be published in an early issue.

Remember, another Kink Contest is now under way, and this time YOU may be the winner. Enter soon and often. Contest rules are on page 161.



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VICTOR
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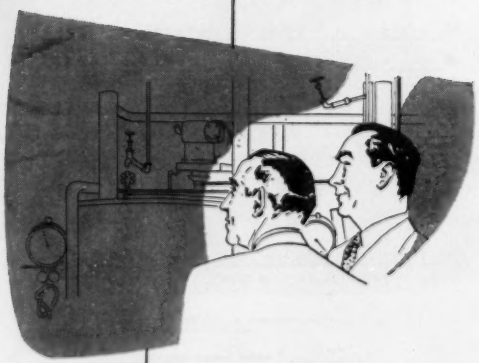

Charles C. Switzer, Vice President
TEXTILE SALES DIVISION
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GREENVILLE, SOUTH CAROLINA

THE KEEVER STARCH CO. ★ GENERAL OFFICES ★ COLUMBUS 15, OHIO
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simultaneously consider both the construction of the particular fabric and the cost limitations.

A simple method for expediting the necessary calculations and freeing the mind and hand for the more important phase of judging results is a hectographed work form developed at our mill. All the equations required for the solution of the problem are pre-stated; it is only necessary to fill in the pertinent data and jot down results in the spaces provided.

The average yarn count gives the first indication as to the proper range of counts. The warp yarn count is temporarily selected pending the calculation of the filling count. If for any reason the first combination is not found satisfactory, an alternative selection can be made.

In the illustration [on page 159] the 10/1 warp yarn, giving an 8.84/1 filling yarn, produced an unsatisfactory combination. The alternative of a 14/1 warp yarn count, which was already manufactured in the mill, required a coarser 6.51/1 filling yarn. This combination was judged to be more practical for the construction in question.

The per cent crimp is determined empirically, by comparing the proposed construction to crimps of known similar fabrics. The 5 per cent size is a value obtained from actual tests, and is used in all grey fabrics.

CONTRIBUTOR No. 8741

Speed Up Fiber Fineness Tests?

Readers Comment Pro and Con

On pages 185 and 187 of the September, 1954, issue, TEXTILE INDUSTRIES *presented an article, "Speed Up Fiber Fineness Tests," by J. Alberts of the Dutch Fiber Research Institute (Vezelinstituut T.N.O.), Enschede, The Netherlands.*

The principal points made by the author were that accurate weighings of samples for the Micronaire were not necessary — most differences are not significant, and can usually be tolerated — and that correction graphs can be constructed which will permit relatively large deviations in sample weight without affecting results adversely.

Since the article was printed, we have received a number of comments on the article, both pro and con, from textile quality control men. Several of them are printed below.

EDITOR TEXTILE INDUSTRIES:

Mr. Alberts reports a systematic series of measurements made to determine the amount of latitude permissible in the weight of cotton sample in order to secure Micronaire fineness values within a stated precision range.

He concludes, in essence, that a variation of approximately 0.75 grains plus or minus around the stipulated fifty-grain weight for the sample will result in a variation of the Micronaire reading by about 0.1 Micronaire unit.

Mr. Alberts presents data plotted to permit estimation of the error for variations in sample weight outside of the range mentioned above.

The examination of the precision of measurement of any technique is a most essential and important step in any work. The author failed to mention that in general the actual moisture content of the cotton being measured, unless under carefully controlled atmospheric conditions, is itself seldom known. One may assume that cottons tested routinely in making up mixes at an average mill might vary by several per cent. It is obvious, therefore, that this in itself introduces a very definite error in the Micronaire results unless special steps are taken.

As a consequence of the results of Mr. Alberts' measurements, it is proposed that if a plus or minus 0.1 Micronaire unit can be tolerated in the measurements, then the routine operation can be speeded up by comparison with a technique requiring each sample to weigh

(Continued on page 207)

KINK CONTEST!

$100 will be awarded the winner

Send your entry now! This contest ends April 15, 1955

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are judged.

The contest rules are simple:

► All contributions must be postmarked not later than midnight, April 15, 1955.

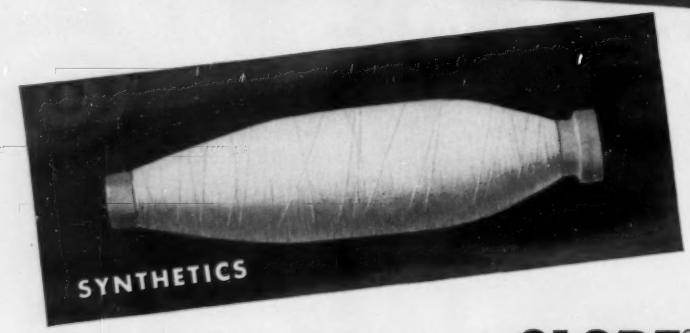
► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance — no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously.

Send your contest entry to:

Editor TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Georgia.



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Now industry's three-phase motors can have full three-phase protection with standard in-stock motor control!

Many motor users have proved *two* overload relays are no longer adequate protection for three-phase motors. In fact, motor burn-outs have become so widespread that Section 4327 of the National Electrical Code was recently amended. The code now permits authorities to *require* three overload relays in three-phase motor control . . . and this provision is already being enforced in some areas. Many safety experts and power engineers say the time is not far off when three-phase motor control with less than three overload relays will be unacceptable.

The use of three overload relays is not new. Many industrials plagued by recurring motor burn-outs and the resulting intolerable operating interruptions have changed to three-relay control. But such changeovers have been slow to effect and costly as no standard control was available with three overload relays. Special constructions and enclosures have always been required.

The BIG news today is that this is no longer true. The new Cutler-Hammer ★ ★ ★ Motor Control offers *three* overload relays in all standard starter constructions and enclosures. You pay only for the third relay, nothing additional for special engineering or manufacture. No extras. No delays. It is *in stock* at your nearby Cutler-Hammer Authorized Distributor. Order Bulletin 9586 today and use it tomorrow. CUTLER-HAMMER, Inc., 1456 St. Paul Avenue, Milwaukee 1, Wis.

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MOTOR CONTROL
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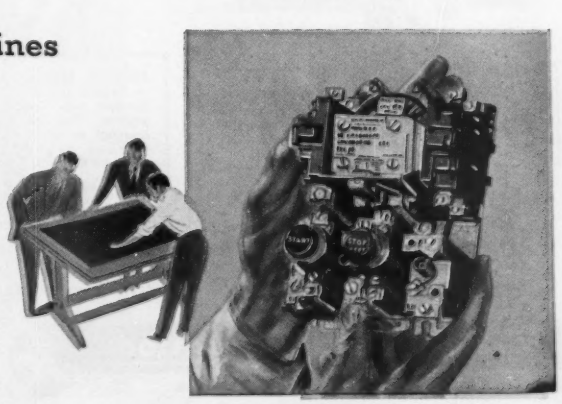
The unit panel construction of Cutler-Hammer ★ ★ ★ Motor Control makes it easy to incorporate starters with three overload relays. Starters mount in place with only three screws, require no more space than starters with only two overload relays. NEMA Sizes 0, 1 and 2 starters and all parts thereof are now available as components. Also a complete companion line of control relays with quickly interchangeable NC-NO contacts. Be sure you have the latest design data on this advanced equipment. Write or wire today.



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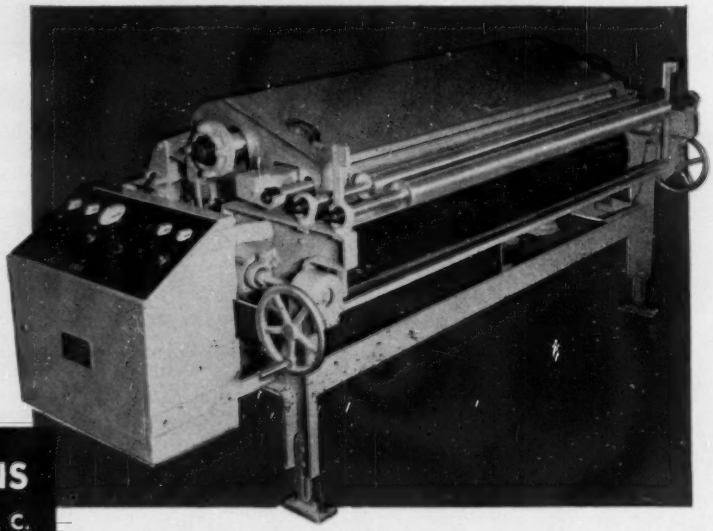
GRIFFIN SIZE APPLICATOR *eliminates exhaust fans, hoods and duct work—slasher changes—dilution and breaking down of size—floating fibers in size box.*



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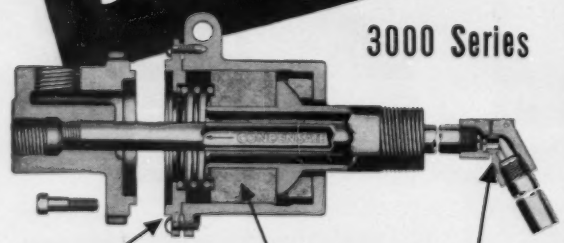
3000 Series



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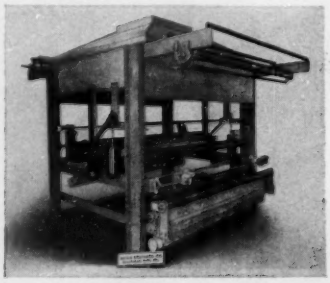

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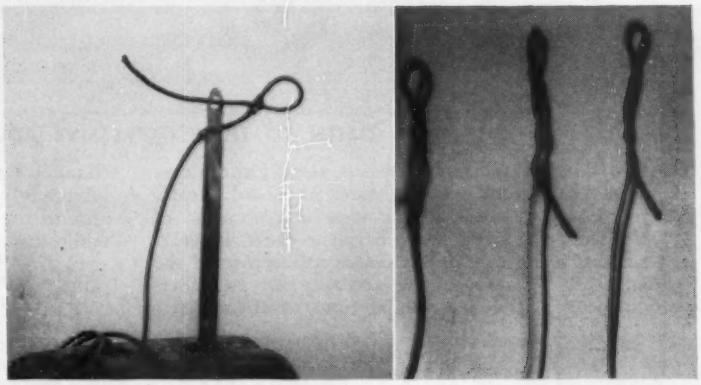
Make This Needle To Hold Harness Cords Securely

HOW OTHER MEN MANAGE

EDITOR TEXTILE INDUSTRIES:

In weaving heavy goods, some mills use wire hooks which hook over harness eyes and through harness cord straps. These are sometimes difficult to adjust. We braid a loop in our harness cords by taking a piece of welding rod ¼" round, flattening out one end like a needle, then boring an eye in the end, as shown in the accompanying illustration.

The cord is turned to loosen the twist. The loose place is pushed down over needle and end is put through eye. When the cord is pulled up off the needle, end is pulled through loose part. This is done several times, leaving a very small eye. When the cord is pulled tight, it stretches out and can be easily pulled through the eye in harness strap three or four times. This eliminates the need of wires and also makes the cord last a long time because it is three and four ply around the straps.

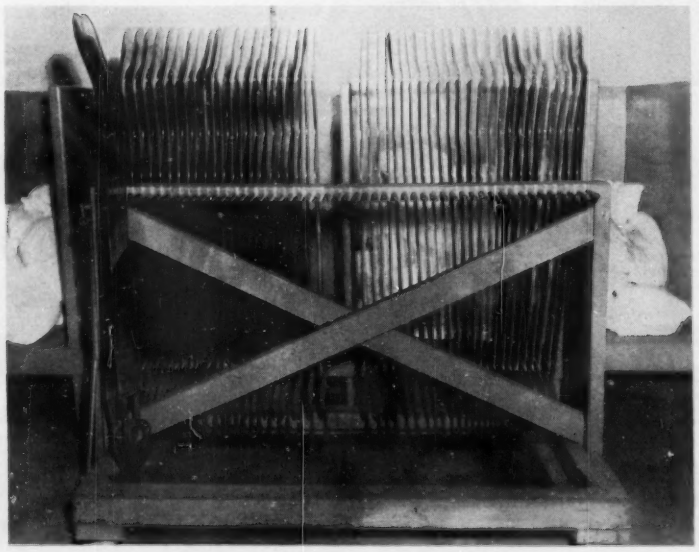


TWIST IS LOOSENED in harness cord (left), and loose place is placed over needle eye. End is pulled through eye, and when cord is pulled up off of needle, end is pulled through loose part again. Braiding operation on needle is performed until a small eye is left, as shown at right. When the cord is pulled tight, it stretches and can be easily pulled through eye in harness strap three or four times.

Our fixers make up a supply of these and carry them in their tool boxes. Another advantage of this arrangement is that as the cord stretches it does not have to be cut and a new knot tied but is merely pulled through as necessary.

CONTRIBUTOR No. 8615

This Easily Made Truck Protects Spare Preboarding Forms



EDITOR TEXTILE INDUSTRIES:

Extra sets of preboarding forms are necessary for full capacity and flexibility in full-fashioned boarding rooms. Consequently, protecting the idle sets of forms from damage due to small nicks and burrs while in storage presents a problem.

We have found one type of storage truck (see accompanying illustration) to be practical, and compact, as well as adequately protecting the forms from damage. Loosely stacked forms often acquire nicks and burrs that subsequently damage the knitted fabric.

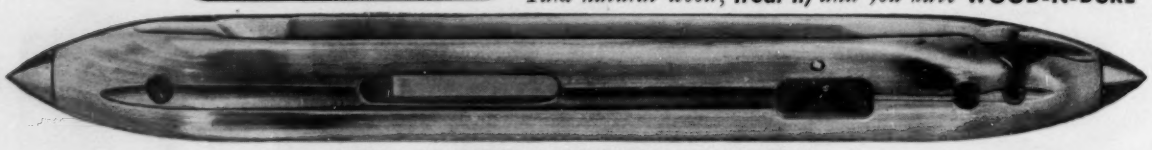
The truck is 54" long, and the total height is 43". Accommodations are provided for four sets of

(Continued on page 168)

You'll be hearing a lot about the amazing

US WOOD · N · DURE PATENTED SHUTTLE *

Take natural wood, **treat it,** *and you have* **WOOD-N-DURE**



LISTEN TO THESE IMPRESSIVE ADVANTAGES:

It will better withstand **stresses, shocks and blows** • its "hardened" wearing surfaces afford greatly increased resistance to the wear and abrasion of the loom • when it **does** begin to wear, it wears smoothly and evenly • it resists splintering of the edges • it eliminates the necessity for any fiber-cladding • it is more impervious to atmospheric changes • the treatment leaves the center-section relatively soft to afford maximum holding power around the tip • the natural wood is **toughened,** while the resiliency is **increased!**

* A **WOOD-N-DURE** Shuttle will outlast an ordinary shuttle by **2** to **1** or better!

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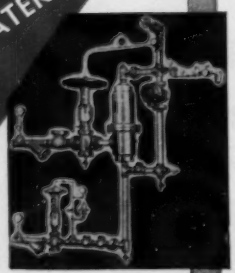

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★ *Water Is Heated INSTANTLY* by steam injection. Fuel savings are substantial because there is no waste — water is heated only as used.
★ *Pick Heaters Maintain Continuous Flow* at preset temperature for bleaching, dyeing, scouring, etc.
★ *Safe, Quiet Operation.* Exclusive "Pressurizer Piston" assures maximum safety and eliminates hammer, noise and vibration on continuous or "start and stop" loads.
★ *No Storage Tanks Required.* Pick Heaters are compact — can be installed in corners, on walls or overhead. Saves valuable floor space.
★ *Many Other Cost-Reducing Advantages.* Maintenance cost is remarkably low because Pick Heaters can be cleaned in a matter of minutes. Installation is simple and inexpensive . . . only ordinary pipe connections are required.

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Clipper Hooks are made of the finest quality wire—BETTER than ever before—produced for our exclusive use. Hooks hold with firm, sure grip—give longer satisfactory service.

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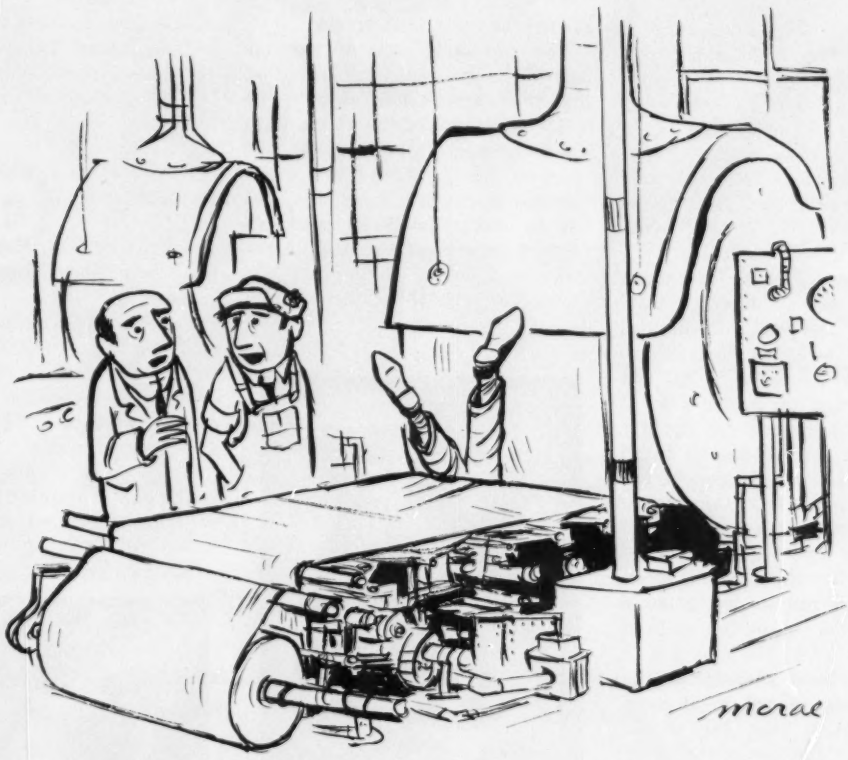

"Ol' Si's been around four times trying to locate the trouble."

Exaggerating? Just a bit perhaps, but your Seyco man honestly gets steamed up about tracking down your troubles. There's no limit to the time he'll spend or the things he'll do to help you come up with the right compound, or the perfect production answer. Get to know him better. Try to stump him with your questions. If he doesn't know the answers, he'll say so; come back to our labs and ask those who do.

Warp Sizing: *Softeners, Binders, Penetrants, Ty-In Penetrants, Shuttle Dressing.*

Wet Processing Chemicals and Auxiliaries: *Dye Assistants, Penetrants, Rewetting Agents, Sanforized Fabric Oils, Detergents, Scouring Agents, Softeners.*

Niagara Twist-Setter: *Yarn Conditioning Penetrants.*

Headquarters for textile chemicals

SEYDEL-WOOLLEY & CO.

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SEYCO

No Stoop, No Squat To Read This Yardage Counter

(Continued from page 165)

forms plus four spaces for odd forms, making a total of 100 spaces. The base is made of 4″ x 4″ wood forms and is 30″ wide x 54″ long, with 2″ x 6″ battens across the bottom to support two fixed base rollers on one end, and two swivel base rollers on the opposite end. The casters are 4″ in height.

The uprights, cross members, and top rail are all made from 2″ x 4″ wood. The top rail recesses which hold the forms in place are fitted with 12″ lengths of ⅜″ rod equally divided on either side of the rail. Rubber hose, cut slightly longer than the rods, is fitted snugly on the rods to protect the forms from metal to metal contact.

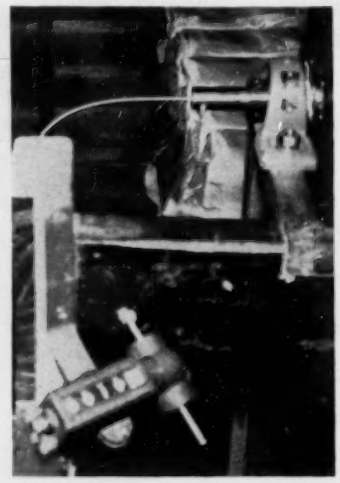
In operation, the trucks are all pushed close together in a storage area in the boarding room. When the forms are put in use, a truck load of forms is pulled out of storage, and when the changes in forms have been completed, the truck is again placed in storage. We have found that the trucks save a great amount of labor in handling forms, and the total cost of construction is less than $25.

CONTRIBUTOR NO. 8682

EDITOR TEXTILE INDUSTRIES:

The ordinary type of yardage counter is generally mounted so that the counter shaft runs in the roller which takes the cloth. With the counter mounted this way, the operator has to look down or to one end to check his yardage, and has to stoop down to reset his counter to zero at the end of the roll.

Another type of counter runs on a wheel which rests on the roll being measured. This type was not applicable in our case.

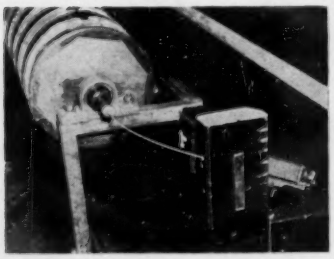


Our operation required the measurement of 500- to 900-yard rolls of a coated fabric onto tubes of 50 yards each. The accompanying illustrations show how we mounted a counter to make it unnecessary for the operator to stoop down every time the counter had to be reset.

First, we purchased a length of speedometer cable from an auto supply store. This cable is made of several layers of spring wire, each layer twisted in the opposite direction from the one preceding.

A ¼″ hole, 1″ deep, was bored in the end of the shaft which turns

(Continued on page 171)



Don't Discard Worn Pick Gear Shafts—

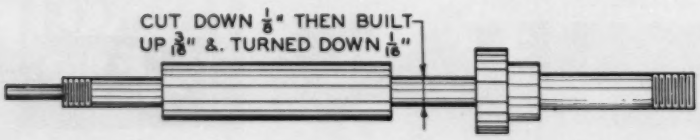
Try This Simple Repair Method

EDITOR TEXTILE INDUSTRIES:

We have devised a good method to repair pick gear shafts when they become worn. Using a metal lathe, we turned the worn part down an eighth of an inch, then built it up with weld to three sixteenths of an inch. Then we turned it in the lathe to correct size, which meant removing another sixteenth of an inch.

I don't know just what the engineering rule is regarding brass running in brass, but these parts seem to work well. The brass weld is harder than the ordinary brass bushings.

We have six extra shafts, so I change six at a time and have the shop repair six at a time. This is quicker and cheaper than having equipment set up to do one piece. The accompanying illustration shows a repaired shaft.



Our looms have a long sweep on pick gear take-up arm. On XD looms this arm has a brass bushing which wears much but can be easily replaced. The shaft which rides in the bushing is the one which wears. It seemed to be a shame to discard the whole part; therefore we managed to improvise the repair.

CONTRIBUTOR NO. 8677

CARDING IS THE FOUNDATION FOR QUALITY

NO. 14

TIPS ON CARD STRIPPING vs QUALITY WORK

1. A proper stripping schedule is highly important in your mill to maintain quality.

2. Quality frequently can be improved by increasing the number of strips per shift. Fortunately, however, the waste thus produced does not increase in the same proportion as the stripping cycle. For example, if strippings are increased from 2 to 3 per shift, the increase in number of strippings is 50%; however, the waste per strip will *decrease* about 30%.

3. Some mills running irigated cotton have found it necessary to strip 4 times in 8 hours rather than 3 times, to better control nep count. In such cases, while stripping was increased 33⅓%, total waste per 8 hour shift increased only 15% to 18%.

4. Stripping equipment and settings of that equipment — whether vacuum or brush — must be maintained at a very high standard of efficiency, so as to maintain quality of stripping and protect the card clothing. Such care results in maximum performance, especially when it becomes necessary to increase stripping cycle.

5. Some mills have increased their stripping cycle without benefit of quality and with damage to card clothing, by improper maintenance of stripping equipment, plus little or no supervision of actual stripping operation.

6. Suggested checks on Vacuum Stripping Equipment:

   A. Always have sufficient suction capacity to permit of stripping 4 to 6 cards at a time.

   B. Nozzles to cylinders and doffers should be set correctly.

   C. Nozzles set too far away will not strip properly.

   D. Nozzles set too close will permanently damage clothing — resulting in early shedding out of wire.

   E. Burred and rough nozzles will choke up, preventing a good stripping job.

   F. The traversing worm or screw should be kept free from impacted waste, so stripping head will travel freely across width of card.

   G. Keep stripping head and related mechanism securely fastened to doffer shrouds at all times.

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please turn the page ▶

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It's "Plough Ground"

All Ashworth cylinder and doffer fillets for processing cotton and many of the staple synthetic fibers are "plough ground". Plough grinding consists of running a "plough", with a thin grinding disc directly above it, between each row of fillet wire. Thus the wires or teeth are gradually tapered above the knee to a working point on each side. The front and back of the wire are not ground, so that strength in the carding direction is not sacrificed.

The advantages of plough grinding are as follows:—

1. The tapered points facilitate the untangling of the fibers and help to prevent and remove neps.

2. Plough ground wire strips more easily. Make your own test. Wrap yarn on the shaft of a pencil and attempt to remove it. The yarn piles up just as the fibers pile up on non-tapered wire. Make the same test on a tapered shaft and notice how easily the yarn comes off.

3. Plough ground card clothing retards loading, keeping the stock above the knee and in a carding position.

If you would like to see our plough grinding operation, visit us at Fall River, Mass. or Greenville, S. C.

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3 Factories — 6 Repair Shops — 7 Distributing Points

(Continued from page 168)

the cloth. The cable was fastened in this hole by an Allen set screw put in another ¼" hole bored and tapped ½" from the end of the shaft.

The other end of the cable was run through a ⅝" hole bored in a 2" x 4" upright and fastened in the end of the counter shaft, which protruded about ½" into the hole in the upright. The hole was bored at an angle so that the counter would be right under the operator's eyes.

The length of speedometer cable that we used was about 15"; for longer lengths it would be advisable to run the cable through a piece of conduit.

CONTRIBUTOR No. 8748

No More Oil Stains on F-F Hosiery Inspectors' Shoes

EDITOR TEXTILE INDUSTRIES:

We use Ammon automatic inspection machines in our hosiery plant. This is the same type of equipment many other hosiery mills are using, therefore our problem and the simple method of solving it should be of general interest to many plants.

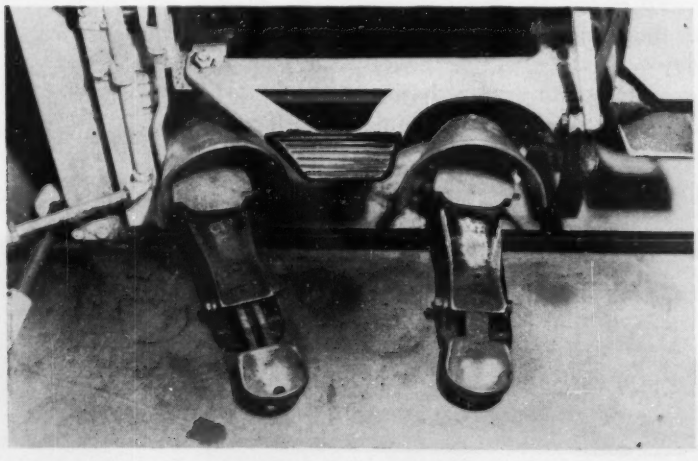
These inspection machines have a high productive capacity, involving a series of intricate mechanisms in their operation; all of these mechanisms must be oiled frequently to prevent excessive wear, but the unavoidable dripping of oil from the adequately lubricated moving parts caused our problem.

All of our inspectors are women, as is usual in most hosiery mills. The actual working conditions are equal in cleanliness to many offices, and so the inspectors wear better-than-average clothes. However, while the inspection machines require frequent oiling, they cannot be equipped with catch-pans for the oil. Consequently, quite often the operators were complaining about the oil dripping down on their shoes and soiling or even ruining them. Careful investigation proved that their complaints were well founded.

We called a local metal shop to take the necessary measurements and design the metal toe-guards shown in the illustration. The toe-guards are formed from heavy gauge sheet metal, and are fastened to the front of the pedal by two ¼" stove bolts. The toe-guards are slanted towards the machine, so that any dripping oil is drained forwards and away from the operator's shoes.

The cost of the toe-guards was only $3 per pair, and they have solved the problem of soiled shoes and the resulting complaints.

CONTRIBUTOR No. 8728

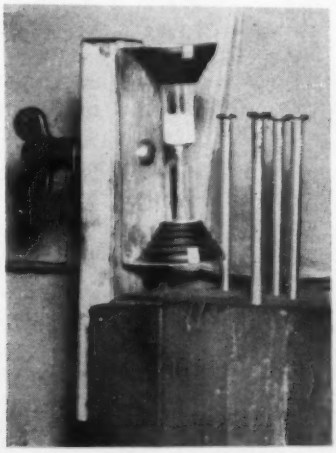


How to Steam Filling Uniformly

EDITOR TEXTILE INDUSTRIES:

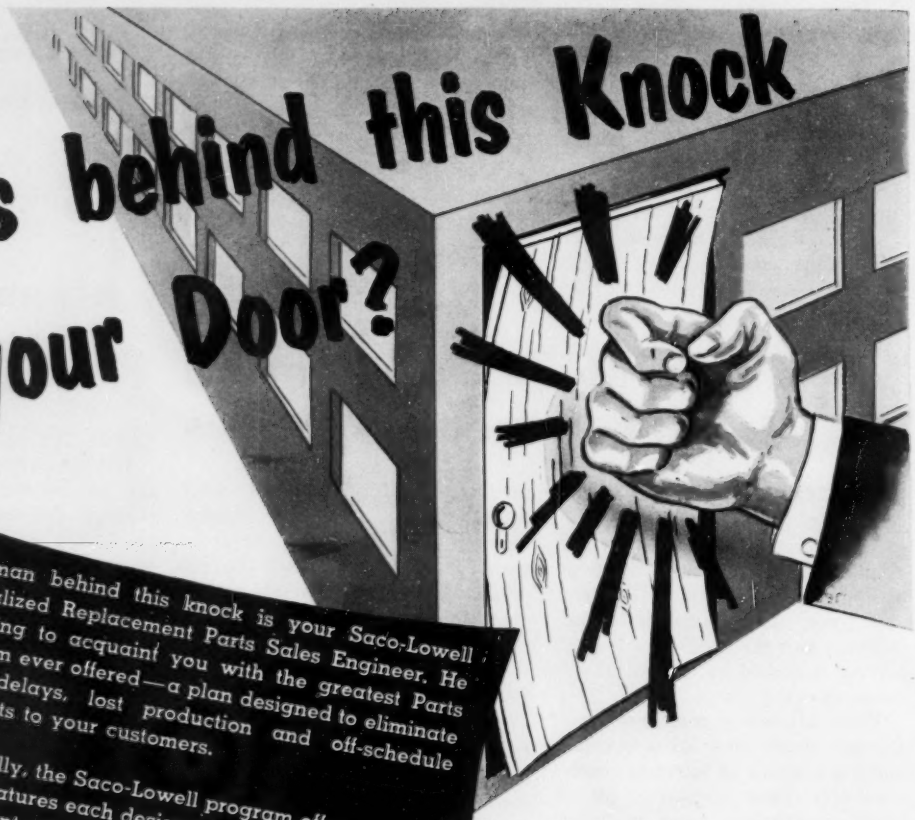
We have had considerable trouble in getting our filling yarn steamed for the correct length of time. For example, one type of yarn runs much better if steamed for four minutes, and quillers were given instructions to steam it for exactly that period. However, some did not have watches and guessed at the time; others were careless, and so the four minutes sometimes stretched into ten.

We overcame this difficulty by using a four-minute egg timer purchased at the five and ten and mounted on the steam box. First, we cut an eight-inch piece from an old picker stick, bored a ⅜-inch



hole in the center and two ¼-inch holes for screws about an inch from the bottom. We then covered the front of the stick for five inches with a piece of tin, leaving enough tin on top and bottom to cover the ends of the timer, and clipped the

Who's behind this Knock on your Door?



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tin over the top and bottom of the timer to hold it in place.

A 3/8-inch bolt with a lock nut and wing nut holds the timer to the piece of picker stick, and makes it easy to turn it over. Four nails around the timer act as a guard.

Filling is now steamed for exactly four minutes when required, perhaps because the girls who do the steaming like to watch the sand run through the glass!

CONTRIBUTOR No. 8709

HOW OTHER MEN MANAGE

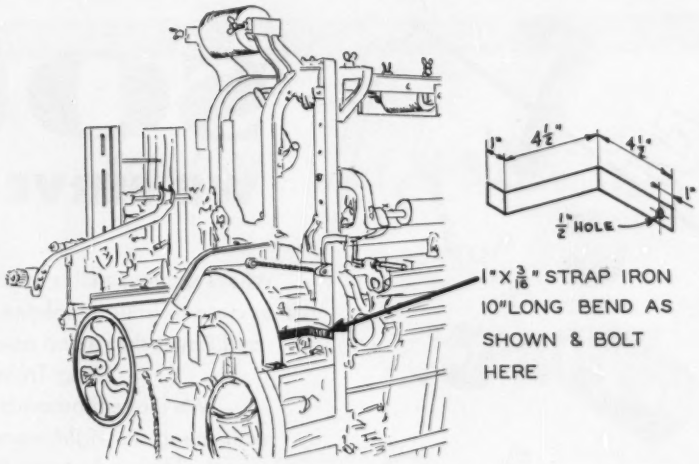
Install This Guard— Stop Loom Brake Band Slip

EDITOR TEXTILE INDUSTRIES:

On Crompton and Knowles C3 and C5 looms, the brake band has the tendency to slide sideways. A simple guard we have used to overcome this trouble is shown in the illustration at the right. The device is bolted to the side of the loom in a position opposite the brake band, and the end rests lightly on the edge of the band. This simple addition to the loom has been a big help.

The only stock required for the part is a piece of strap iron 10 inches long, one inch wide, and 3/16″ thick, bent as indicated in the accompanying sketch.

CONTRIBUTOR No. 8659



Cures for Cloth Defects in

Open Width Bleaching

EDITOR TEXTILE INDUSTRIES:

In finishing cotton fabrics, we have been bothered from time to time in the past by stains, lay marks, and rub marks from our open width bleaching range. By "lay marks" is meant streaks across the width of the fabric, occurring at the folds where the cloth is packed into a J-box.

I would like to discuss our investigation of the possible causes of these defects, and some of the steps we took to correct them.

We have never had any success in desizing grey goods and then boiling them out in both sections of the open width range, such as is done with goods to be dyed with sulfur colors or dark shades that do not require bleaching or mercerizing. It is our opinion that the grey mill size is cooked into the cloth by the hot J-box, and we have never been able to remove the resultant stains once they get into the cloth. I must state, however, that our chemist is not in agreement with this explanation of the stains.

Adequate moisture is necessary on all parts of the cloth while it is in the J-box. The orifice in the desuperheater piping arrangement should pass sufficient water to keep the cloth quite moist, so that any excessive temperature in the caustic or peroxide J-boxes will not dry out the cloth during its storage.

We increased the orifice in our piping arrangement, and have applied Fischer & Porter's Flowrator Control so that we can feed in 3 to 4 gallons of water per minute, insuring adequate moisture at all times.

We have installed the perforated pipe at the entering end of the J-box itself, with a valve that can be opened from the ground floor level so that if we have a power failure or if the equipment is stopped for any other reason the spray pipe will thoroughly wet the goods in the J-boxes, to prevent lay marks from forming during the shut-down period.

Periodically, we polish the inside of our J-boxes with a wool-covered revolving disk on an air motor, similar to the device used for waxing a car. We use a metal-polishing wax in stick form for this purpose, and we find that if the boxes are polished well about

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every other week any silicate that may have been deposited is thoroughly removed, thus eliminating a source of abrasion and rub marks.

The value of our method of polishing the inside of the J-boxes was reconfirmed by a recent incident. After a 5-day shut-down, we found some rub marks in goods which had been prepared for dyeing. The range had been shut down long enough for the chemicals to crystallize on the stainless steel boxes and cause the rub marks. However, after the J-boxes were polished the following week the dyed goods were excellent. We feel that the appearance of the residue inside the J-boxes is not dependent on the time the range has been in operation, but on the opportunity which the chemicals have had to crystallize.

We now make a practice of polishing our J-boxes before beginning operation after a shut-down, in addition to polishing at regular intervals, and have had no further trouble from rub marks caused by residues left in the boxes.

CONTRIBUTOR NO. 8757

Try This Handy Loom Fixers Work Sheet

EDITOR TEXTILE INDUSTRIES:

It occurred to me that your readers might be interested in the work-sheet system which we use to keep track of the work that our loom fixers do.

We have a board hung on a post in the center of each loom fixer's section, on which each weaver enters the job to be done and the loom number. After the loom fixer completes the job, he puts his signature on the board, to signify that the work is done.

The fixers' work sheets are placed on my desk at the end of each shift. They quickly bring to my attention things that may require correction. For example, I can see if a fixer has been called to the same loom two or three times during a shift. I can then go to the loom and determine why.

If the same loom is down on more than one shift it may mean that the loom fixers are stuck, and I can help them out of their difficulty.

If a pattern of certain parts being broken develops, I can find the cause and perhaps strengthen the part. I can also check on supplies and see how they are standing up.

Seconds can be checked on by determining what fixer worked on the loom concerned, and what he did or did not do.

CONTRIBUTOR NO. 8717

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We can go a step further and say that today you get more than you pay for in Jenkins Dynamically Balanced Cylinders and Engineered Card Screens. Good customers like you are worthy of our special attention, and you can be sure we're going to bend over backwards to keep you happy and satisfied.

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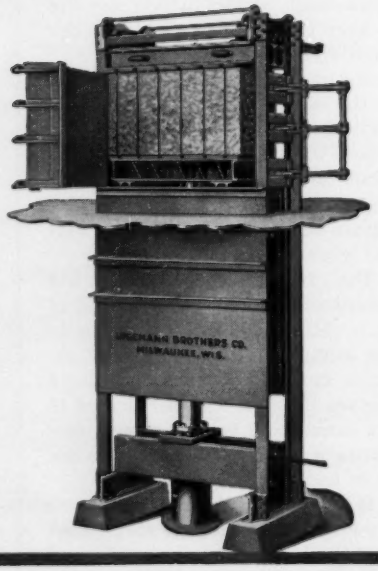
Open balers for finished goods may be hydraulic or power-driven. Give platen dimensions required, maximum height of pile to be compressed, number of bales per hour, when requesting information on open balers.

Tell Us Your Baling Problems

That's the best way to get the right answers to low-cost time-saving baling. During our sixty years of building balers for the textile industry we've solved many a baling problem for mill owners. Our engineers know how to make baling operations pay their own way in time and labor-savings, in speedier, more reliable handling of bales, in lower maintenance cost. Many Logemann balers have been in profitable operation since the turn of the century—evidence of the ruggedness, durability, and long service life of Logemann baling presses.

In the interests of better baling operations in your plant, find out what Logemann balers can do for you. Tell us what your specific problem is. We'll gladly show you how it can be answered in terms of better bales at lower costs and make a specific recommendation based on your requirements. Write for information today.



Box balers for waste may be obtained in either the hydraulic or power-driven type. Mention the kind of waste to be baled, how much in how many hours, the preferred size or weight of bale when inquiring about box balers.

LOGEMANN BROTHERS CO.

3102 West Burleigh Street • • • Milwaukee 10, Wisconsin

Humidification —

Answers to a Mill Man's Questions

HOW OTHER MEN MANAGE

By Franklin C. Wertheim
Abbeon Supply Co.

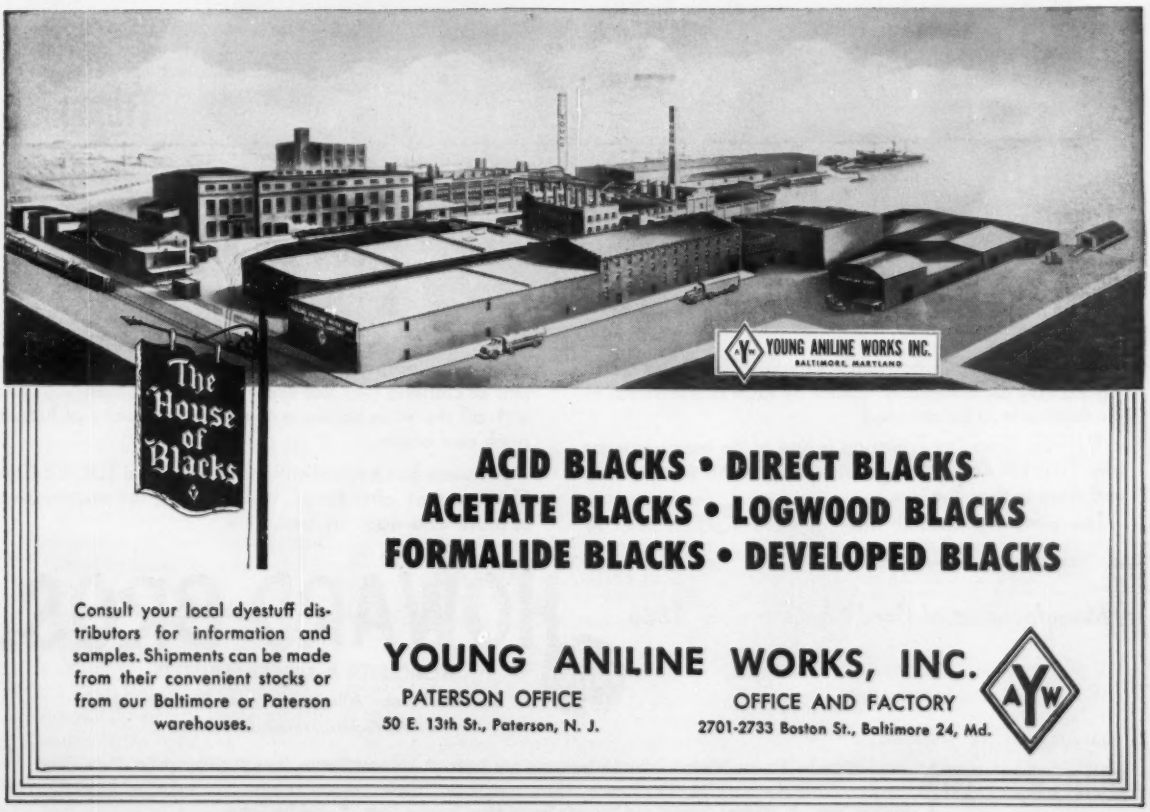
What do you mean when you say "textile fibers are hygroscopic?"

By hygroscopic we mean simply that they have the power of picking up and retaining moisture. Or, more specifically, that they give up moisture to the air and take moisture back from the air in accordance with the relative humidity of the air.

A story that my grandfather used to tell about how he bought raw cotton from the local small farmers back in Arkansas illustrates the effect of high "relative humidity." This was long before the days of scientific testing or analysis, and the cotton buyer went by the feel of the cotton and the weight of the bale. One farmer always seemed to have heavier bales for their size than any of the other planters. Yet when the mill got around to processing his crop there was never any suspicion of the usual petty frauds of having a large rock or chunk of scrap iron in the center of the bale. So Grandpa being a man of direct action queried the grower as to how come the cotton from his farm (these fellows were too small to have "plantations") always was so heavy. The answer was as illuminating as it was naive, "Well, sir, about six years ago I was bringing in my bale and the axle on that old cart of mine broke just as I was coming over the little bridge down by the creek. Took me three hours before I could get that old bale out of the creek, and then it stood on the bank for three days before I could get a new axle. Yes, sir, that year I got the highest price of any man in the valley for my bale, so now every year I use the same "lucky system"—in the creek for three hours, and on the bank for three days. Seems to make the cotton better." Grandpa stopped that practice before the guarded secret of the "lucky system" could spread.

What do you mean by the term "relative humidity?"

By relative humidity is simply meant the amount of water in the air as compared to saturation or rain. If we are dealing with a fiber or fabric that has been conditioned at one RH and put it into a space where the RH is higher or lower it will (being hygroscopic)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CARD CLOTHING

Trimmed to Give Full Carding Efficiency

The trimming operation in the manufacture of card clothing is a very important one. It must be RIGHT if top quality production is to be attained.

TUFFER Precision Trimming is one of the major reasons why TUFFER Card Clothing fits the cylinders so smoothly and does such a fine job.

The perfectly-trimmed sides of each TUFFER filiet fit snugly and properly against each other, forming a single unit of clothing that has every point in position . . . and with all the wires having a complete uniformity of height, pitch and angle.

For years hundreds of mills have reordered TUFFER Card Clothing time after time. It fully meets the requirements of those who want the best.

B-1

Manufacturers of Card Clothing since 1866

Tuffer

HOWARD BROS.

WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga., and Gastonia, N. C.

Direct Representation in Canada

TUFFER PRODUCTS Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Re-covered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plants • Midgley Patented, and Howard's Special Hand Stripping Cards • Top Flat Chains

take on moisture or give off moisture as the case may be.

Then how come on days in the winter time when the man on the radio says the relative humidity today is 78%, or in fact even on days when it rains, that my fibers lose weight and static tangles up my machinery?

The simple reason for that is that the relative humidity in your mill is much lower than that of the outside air.

Why should relative humidity in my plant be lower than it is outside?

Because when air is heated it can hold more moisture in each cubic foot. Let us take a typical example. It is a cold winter day outside and the temperature is down almost to freezing. A cold rain is coming down so the humidity of the air is almost 100%. At this temperature the air can hold about two grains of moisture in a cubic foot; the rest rains out. Not wanting to wear an overcoat while you work you have heated your plant to a nice comfortable 77 degrees. At this temperature that same cubic foot of air can now hold about 10 grains of water. So the best relative humidity you can expect would be about 20%.

Does the relative humidity in my mill ever go down to 20%?

Well, that depends on a number of factors, but one thing you can be sure of is, that if it's over that percentage at those temperatures, that the extra moisture has to come from some place. Usually the air will rob additional moisture from every convenient source—yarns, goods in process, wooden machinery parts, and of course the noses and throats of people in the area.

What troubles usually are associated with low humidities?

Static comes into the picture below 40% and gets worse as the humidity drops. This same static causes the fibers to act in the fashion of small magnets and repel each other so that they stand out stiffly at an angle and tend to break off, causing snapping of threads and jamming of machinery. Of course this makes extra lint and fly. Loss of weight can also be costly where the finished product is sold by the actual weight rather than on a tested regain basis. Too, the extensibility of the yarn can be seriously affected, leading to poor coverage and unevenness.

How can I accurately measure relative humidity?

The best way is by use of a fairly simple instrument called the "sling psychrometer." This takes a minute or two but is highly accurate and fairly inexpensive to purchase. There are a number of direct-reading humidity indicators

(Continued on page 183)

YOU SAVE ON EVERY DYEING OPERATION

WITH GASTON COUNTY'S RUGGED DYEING MACHINES!

High pressure, high temperature dyeing of today's new synthetic yarns is a precision process. To maintain top level performance, all Gaston County package dyeing machines are equipped with DYEMASTER Controls. Gaston County's *Positive control* and *unequaled ruggedness* of construction assure greater economy of operation and upkeep.

WRITE TODAY FOR ILLUSTRATED LITERATURE

GASTON COUNTY *Pioneers in Automatically* **DYEING MACHINE CO.** *Controlled Dyeing Machinery*

STANLEY, N. C.

Gaston County Dyeing Machine Co.
Terminal Building, 68 Hudson St.
Hoboken, N. J., G. Lindner, Mgr.

The Rudel Machinery Co., Ltd.
614 St. James St. W., Montreal
137 Wellington St. W., Toronto

Look what Carrier air conditioning can do for your mill!

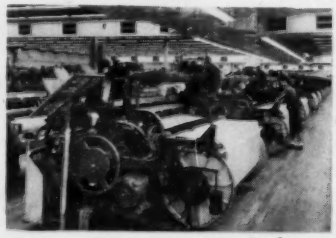
Keeps down-time down

Monarch Mills Ottaray plant in Union, S.C., greatly reduced the number of ends down by adding Carrier refrigeration to the existing evaporative system. Complete air conditioning now holds temperature at an ideal 80 and relative humidity at 50% to 60% in the carding and spinning rooms, 68% in the cloth room—all year round.

Boosts quantity and quality

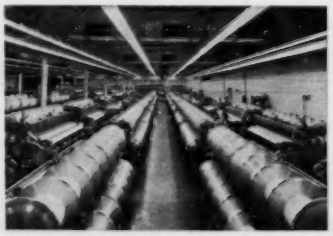
At Knit Products Corporation, Belmont, N.C., 60-gauge machines now turn out more dozens of pairs, more firsts, fewer irregulars. That's because two modern Carrier air conditioning systems *with* refrigeration keep the weather inside the mill drier for nylon, comfortable for workers and constant for the high-speed knitting machines.

Increases weave-room efficiency



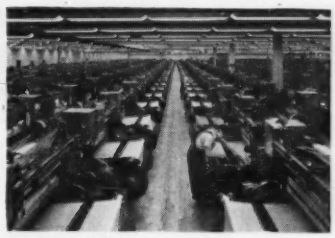
Fewer loom stops, fewer seconds, less loom fixing, lower labor costs are benefits reported by Cobbins Mills, Inc., at Raeford, N.C. Twisting, preparatory and weaving departments are completely air conditioned by modern Carrier systems *with* refrigeration.

Allows higher knitting speeds



Gayley Mill, Marietta, S.C., knits tricot on modern high-speed machinery. Carrier air conditioning *with* refrigeration accurately controls temperature and humidity —keeps machines within close tolerances, helps prevent breakdowns, maintains high quality.

Maintains higher loom speeds



Greenwood Mills depends on Carrier air conditioning *with* refrigeration in its modern Harris Plant, Greenwood, S.C., for accurate control of temperature and humidity that are "musts" for efficient operation of high-speed looms. Like all Carrier installations, it's custom-tailored to the specific requirements of the mill.

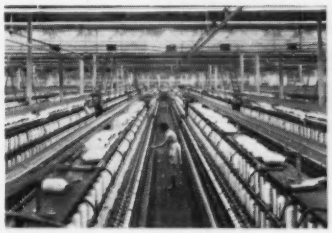
Assures uniformity

Duffy Silk Company, a Carrier customer since 1932, installed three Carrier air conditioning systems in its new nylon throwing mill at Murphy, N.C. Uniform climate provided by Carrier in the twisting, sizing and coning areas helps assure a uniform product for Duffy's customers.

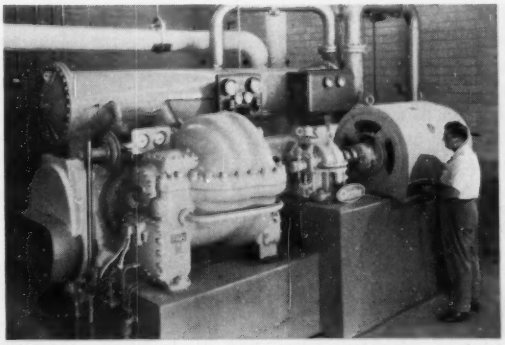
Handles the new blends

Deering Milliken weaves its "Lorette" orlon-wool blend at the Hatch Mill in Columbus, N.C. Because the mill is equipped with a modern Carrier air conditioning system, the Hatch Mill is weaving *more* cloth, yet finding *fewer* defects.

Lowers production costs



Cross Cotton Mills, Marion, N.C., eliminated three extra, expensive twists formerly required to maintain yarn's high quality during summertime spinning. Cross Mills also found that employee comfort and efficiency were improved by modern Carrier air conditioning.



Carrier Centrifugal Refrigerating Machine is the heart of an air conditioning system

Carrier, first and foremost in the field of air conditioning, has been producing centrifugal refrigerating machines since 1922. Carrier has built more centrifugal refrigerating machines—by far—than any other manufacturer.

The Carrier machine can serve dependably as the heart of any air conditioning system of whatever make. It is compact, light in weight and efficient as only Carrier's vast skill and experience can make it. Maintenance records for the hundreds of machines now in service prove that repair costs are so low as to be practically negligible. And some of these units were installed over 30 years ago.

Carrier Centrifugal Refrigerating Machines are available in many sizes ranging from 100 to 4000 tons capacity. Each is tailored to the requirements of the specific job it is to perform.

A free copy of the informative booklet, "Air Conditioning for the Textile Industry," is yours for the asking. Call your nearest Carrier office or write Carrier Corporation, Syracuse, New York.

Carrier

air conditioning
refrigeration
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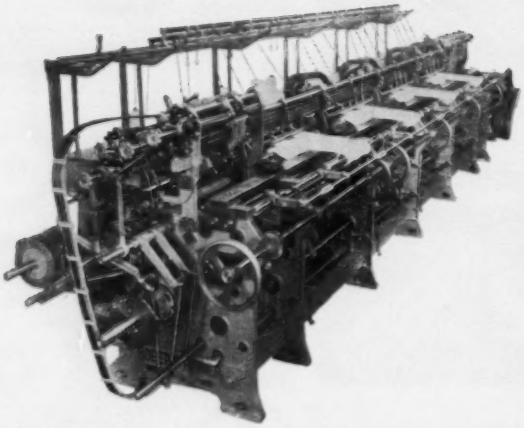
For Unmatched Quality in Knitting - and Making Collars, Trim, etc.

Reiner offers an Unbeatable Combination of Machines---

The Full Fashioned SWEATER KNITTER and The World-Famous SCHAFFHOUSE FLAT POWER Machine



This ***Garment Machine*** is ideal for either a small or large plant, big or small orders. It is a complete, versatile unit of four sections, only twenty feet long, which makes it suitable for U-type set-ups. Fully automatic (except for topping), without gadgets or hand controls, it gives unexcelled production in either 28" or 32" widths.

The ***Schaffhouse Flat Power Machine*** makes a perfect team mate for the Reiner Garment Machine. Fast, efficient, and rugged, this precision-built unit is designed expressly for collars and trimmings for full fashioned as well as cut-and-sewn garments. Up to twenty needles per inch, up to 60" width. Many other unique features.

The same high standards of machine performance and workmanship are guaranteed whenever we act as agents for other concerns. Spare parts are available for all our equipment at all times.

See these Reiner Machines in action at the KNITTING ARTS EXHIBITION Booths Nos. 66 to 73 inclusive, April 25-29, 1955 Atlantic City, N. J.

ROBERT REINER, INCORPORATED

WEEHAWKEN, NEW JERSEY

10 MINUTES FROM TIMES SQUARE

Take Bus Nos. 61 or 67 from Platform 60, Port Authority Bus Terminal, 41st Street and 8th Avenue, New York City. Get off at Pleasant Avenue, Weehawken, New Jersey. From there turn left, and walk through the underpass up to Gregory Avenue . . . . TELEPHONE: UNION 7-0502, 0503, 0504, and 0505. From New York City call LONGACRE 4-6882.

Write to the Editors!

Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editor "Textile Industries," 806 Peachtree St., N. E., Atlanta, Ga.

on the market. All you have to do is glance at them and read the relative humidity directly in per cent. However, even the best of these is not guaranteed for more than 5% accuracy. Many mills use a combination of both instruments; that is, they have direct readers mounted in several strategic places and about once every month or two test and adjust the readers by using a sling psychrometer.

Various people among my competitors have said that they run their mills at relative humidities of 48%, 58%, 68%, and other figures. I've spoken to my suppliers and they give me conflicting information. What is the right percentage?

The right percentage for you is the one at which your mill seems to run the easiest with the least trouble. Now of course that varies with various fibers. A nylon might be happiest at 48%, while a rayon might want 68%. Your best bet is to take what you hear to be the best figure from someone whose word you can trust and start running at that per cent. Then after a few weeks raise the humidity 5%, then 5% again. Then drop back to where it was and reduce it 5%, then 5% again. You will soon know just what is the best percentage for you. Then lock your controls so that no "night shift artist" can play his own games. There is no expert that can tell you how to run your mill from the outside like you yourself on the spot.

What are, generally speaking, the upper and lower limits?

Speaking broadly, you don't want to go below 40%, because that is the static level. Then again, above 70% is the rust level, but some mills run higher for certain fibers.

If I do decide that I need humidifiers, what brand should I buy?

Any of the brands that you see advertised in this magazine is a good buy. However, it's like buying shoes. Some humidifiers are best suited for large mills, some are best suited for small mills or areas. If you get the wrong size, even a good pair of shoes will pinch—and so will the wrong size humidifier. Your best bet is to call in the sales engineers from several reliable firms and listen to them and their advice. Then make up your own mind.

L. F. Dommerich & Co., Inc.

Executive and General Offices

271 MADISON AVENUE

NEW YORK 16, N. Y.

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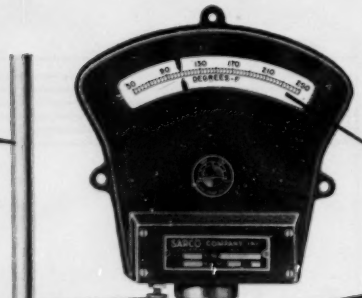
GOOD NEWS for dyers and finishers

Automatic Temperature Control for Under $200!

Simple...Accurate...Reliable



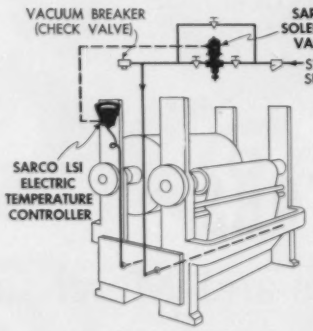
SENSITIVE BULB: A change of only ½°F in the sensing element actuates fully-enclosed switch which in turn controls solenoid to open or close steam circuit.

EASY-TO-READ DIAL: Provides continuous visible check of controlled temperature. Eliminates the burden of maintaining complicated temperature recording mechanisms.

ADJUSTABLE TEMPERATURE SETTINGS: A finger-tip turn of this knob instantly changes temperature settings. Set temperature is indicated by a red pointer at top of dial.

AMBIENT TEMPERATURE COMPENSATOR: Prevents control error due to fluctuations in room temperature. Compensator automatically adjusts instrument to the temperature of the air surrounding the case.

SARCO LSI ELECTRIC TEMPERATURE CONTROLLER



MAN HOURS SAVED, DYEING IMPROVED

A large Eastern textile finisher was having difficulties trying to maintain uniform dyeing. His problem was caused by creeping bath temperatures brought about by the use of manual control of steam valves on dye jigs. Now, after installing Sarco LSI Electric Temperature Controllers (as shown in hookup above) he is getting uniform dyeing jobs. Operator simply sets controller for each run, has time to operate additional jigs.

Yes, you can enjoy all the many advantages of automatic temperature control—without investing in costly, elaborate control equipment.

Here is a Sarco Electric Indicating Temperature Controller which is inexpensive (costs under $200, complete with solenoid valve). It is extremely accurate, thoroughly dependable, simple and durable. Just check the above features.

And you have the assurance, too, of knowing that this Sarco automatic temperature controller has been thoroughly service-proved in many textile plants—on dye becks, padders, vats, jigs, tumblers, etc. We'll gladly send you actual case histories on these applications.

Dyers and finishers who have replaced manual control with this low-cost automatic temperature control report increased production, improved quality, saving in steam and man-hours

For complete information write to Sarco Company, Inc., Empire State Bldg., New York 1, N. Y.

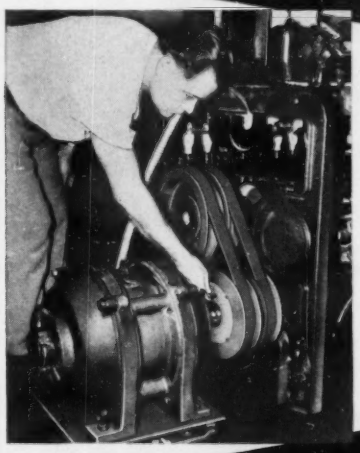
SARCO *improves product quality and output*

2097-B

ELECTRIC AND SELF-POWERED TEMPERATURE CONTROLLERS • STEAM TRAPS • STRAINERS

Now--

Pre-set the Pitch Diameter



COMPONENTS OF
DODGE SPINNING FRAME DRIVE

- Variable Sheave with Automatic Pitch Diameter Gage
- Taper-Lock Companion Sheave
- Slide Motor Base
- Dodge Sealed-Life Belts

No more "cut and try" with the new Dodge Variable Sheave

An automatic Pitch Diameter Gage, graduated in tenths of an inch, is mounted on the outside flange of the new Dodge Variable Sheave. A spiral line on the hub intersects with the gage dial as the flanges are moved in or out. Pitch diameter is read directly on the dial.

Quickly . . . accurately . . . easily . . . you get the pitch diameter you want with a one point adjustment. The variable sheave locks as a unit when tightened on the shaft, utilizing the Taper-Lock principle.

Single or double strand drive

The Dodge Variable Sheave is available for both single or double strand drives — utilizing R-Section Sealed-Life V-Belts in the single or double strand and W-Section in the single strand only. The new, higher ratings of these belts, which contribute to the larger load carrying capacity of the Dodge Variable Speed Drive, open new opportunities for drive economy — both in initial cost and in maintenance. All components — the new sheave, companion sheaves, belts and motor base — are available from stock. Write for full details.

DODGE MANUFACTURING CORPORATION, 3500 Union St., Mishawaka, Ind.

DODGE
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Call the Transmissioneer, your local Dodge Distributor. Factory trained by Dodge, he can give you valuable assistance on new cost-saving methods. Look for his name under "Power Transmission Equipment" in your classified phone book.

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Technical Service in connection with your specific problems is available upon request.

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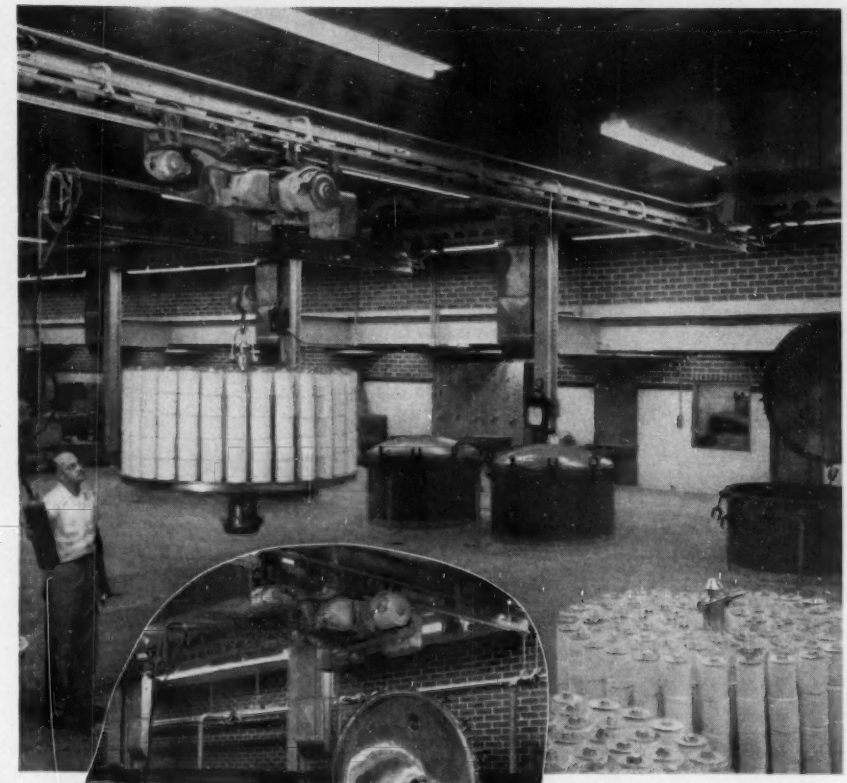


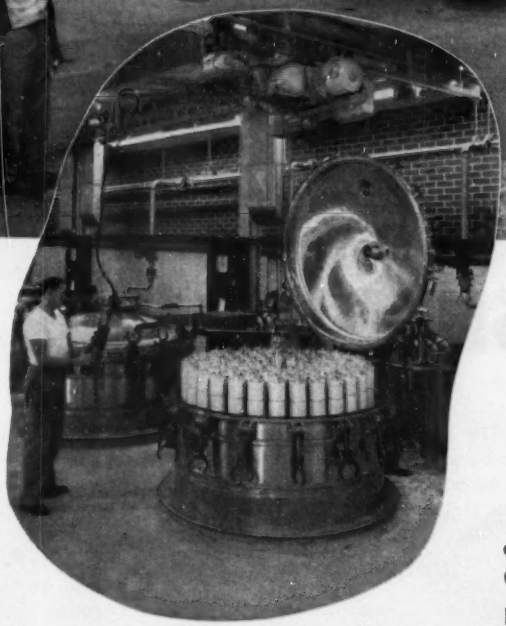
A JOB WELL DONE

Here is how Coats & Clark feel about the Cleveland Tramrail installation, as expressed in a letter from Mr. L. P. Greer, Jr., Chief Engineer, to Mr. J. C. Wilkins of Cleveland Tramrail Atlanta Company:

"There comes a time on a job when one must sit down and take stock of those who deserve praise and recognition for their efforts in making the job successful. During the course of this job, it has been extremely satisfying to have dealt with you and Cleveland Tramrail on the overhead crane handling system. I wish to extend to you my sincerest thanks for a job well done."

Caption T-5540

One of five 2-ton, 37'-4" long completely motorized Cleveland Tramrail cranes at Coats & Clark, Inc., Toccoa, Georgia. Speeds: Crane travel 150 fpm, carrier travel 75 fpm, hoist 6 and 20 fpm. Safe electrification is obtained by use of Cleveland Tramrail SAF-POWRBAR conductors.



Caption T-5541

The advanced control equipment provided for crane travel motions and hoist enable easy accurate spotting of a load and smooth careful lowering into a kier.

CLEVELAND TRAMRAIL CRANES SERVE COATS & CLARK TOCCOA MILL

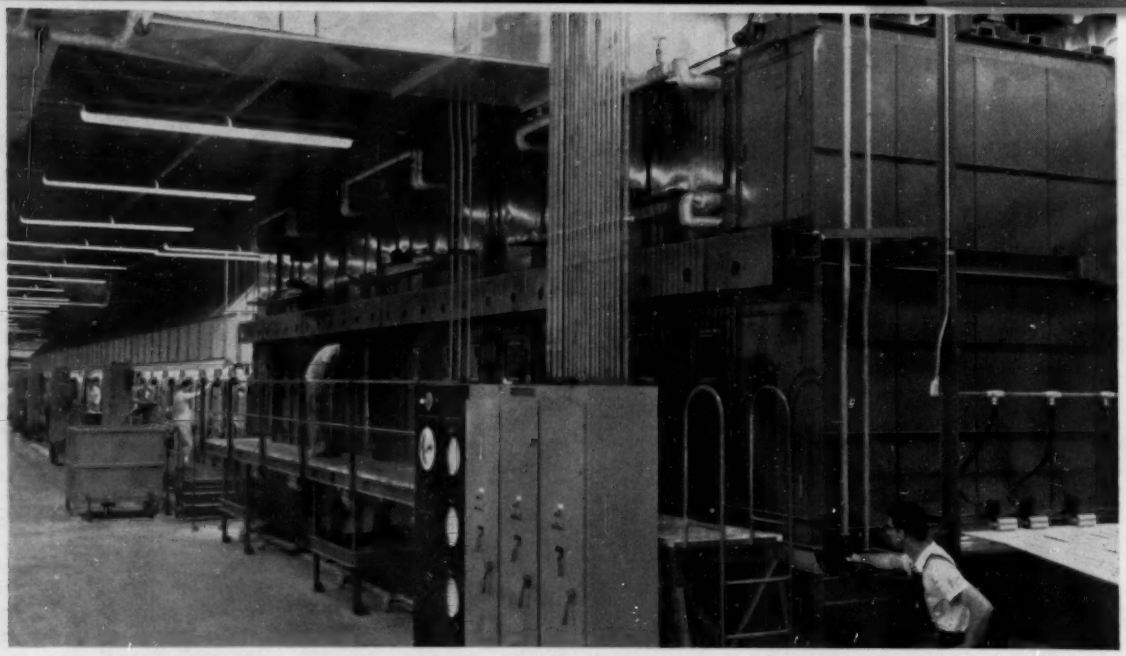
Bleaching, dyeing and drying operations are fast, easy one-man jobs at the new Thread Mercerizing Plant of Coats & Clark, Inc., Toccoa, Georgia. Fully motorized, push-button-operated Cleveland Tramrail cranes eliminate the need of any heavy manual lifting and enable handling large production units and thereby bring about increased efficiency.

GET THIS BOOK!

BOOKLET No. 2008. Packed with valuable information. Profusely illustrated. Write for free copy

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
East 289th St. Wickliffe, Ohio

CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT



World's longest mercerizer, from creel to snake. Note control panels from dryer (foreground) to various sections of wet process unit. Moisture control on dryer exit at far right.

Coats & Clark Build Modern

Thread Finishing Plant

COATS & Clark Inc., has constructed a new $7½ million thread dyeing-finishing plant at Toccoa, Ga., which is modern in every respect. Highlights of the new plant, in addition to its construction, are natural processing flow of material with minimum of backtrack, palletized and electric truck (2-way radio dispatched) material handling, and air conditioning.

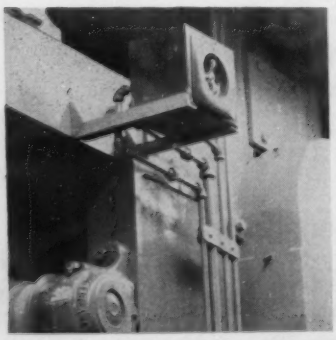
Using over a million gallons of water per day in its work, the plant is fortunate in having an abundant supply of excellent water, even in dry weather; the water is pumped across a mountain into the plant reservoir.

The longest mercerizing range in the world is said to be at Toccoa.

An unusual aspect of the plant is the absence of any finished goods inventory—they are shipped the day the order is completed.

From the boiler room throughout all wet processing, automatic control instruments are the rule rather than the exception, governing the operation and quality of the work.

The accompanying photographs are only a hint of the planning that has gone into making this a modern mill.

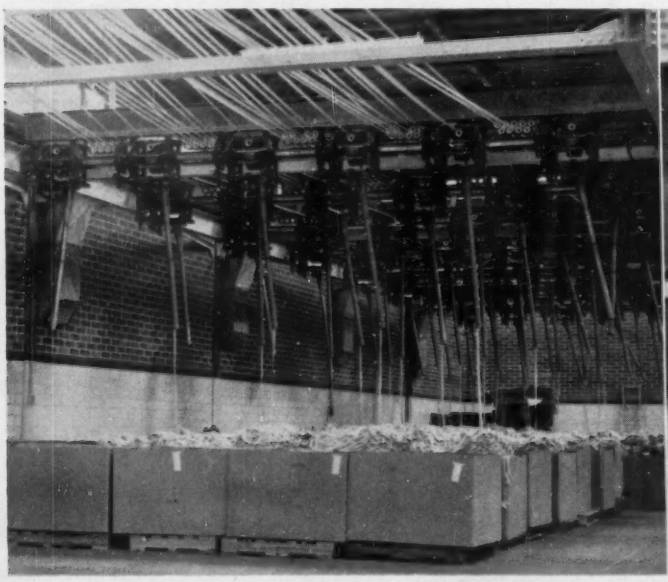


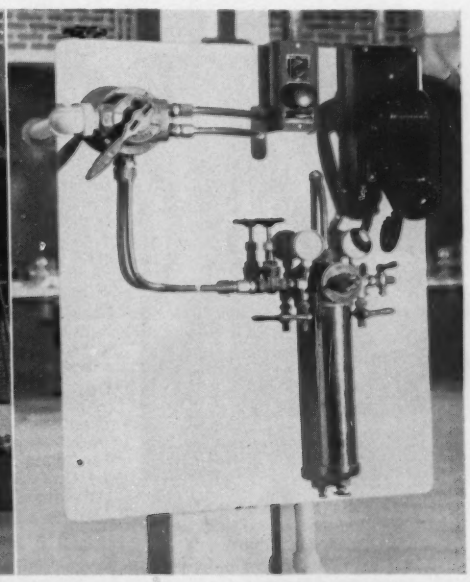
The stop motions on the mercerizing range are located at convenient intervals so that range may be stopped from any position of the operator. Line of fluorescent lamps adequately light the range for its entire length.

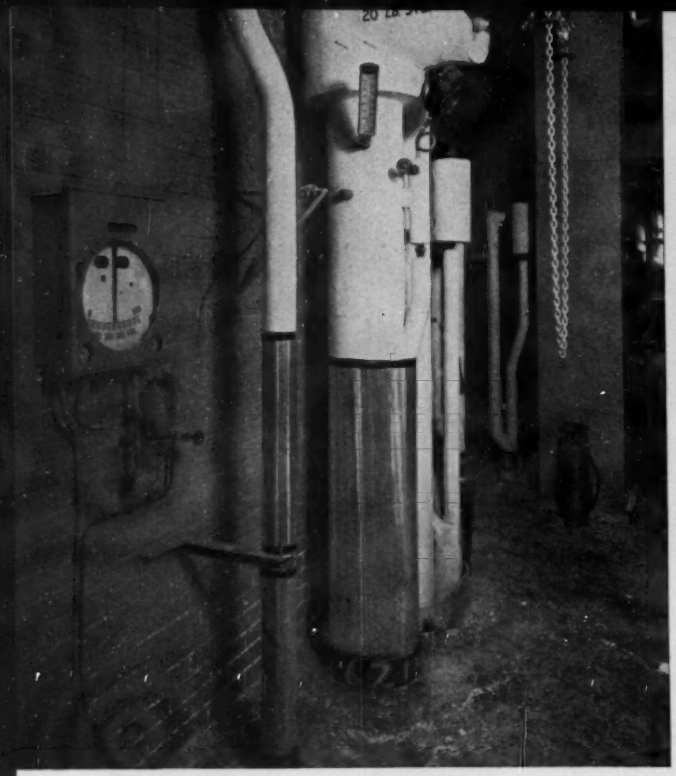
Washing units and caustic units are identified by stencil to avoid any errors and so supervisors can determine the process section from the floor instead of mounting the catwalk.

Main control panel on the mercerizing range has visual instruments and push-button operation.

At delivery end of mercerizer, snakes deliver into boxes which are moved to next process by truck. To shift snakes to empty box, pneumatic device (right) does the job automatically. *(Continued page 186-E)*

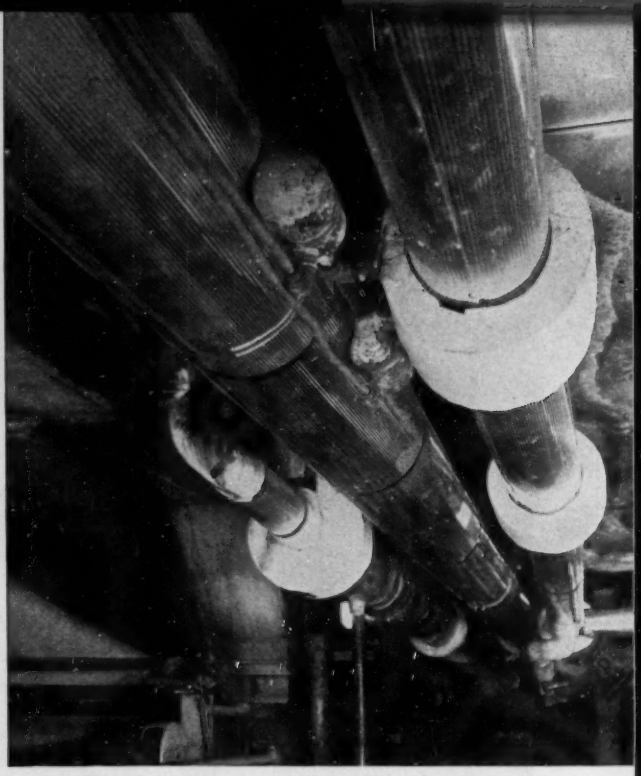






PROBLEM: High maintenance cost of canvas jacketing. High-pressure hot water hose used to clean floor damaged lower ends of lines and necessitated constant replacement.

SOLUTION: Childers Aluminum Jacketing replaced canvas. Waterproof—easy to install—reusable.

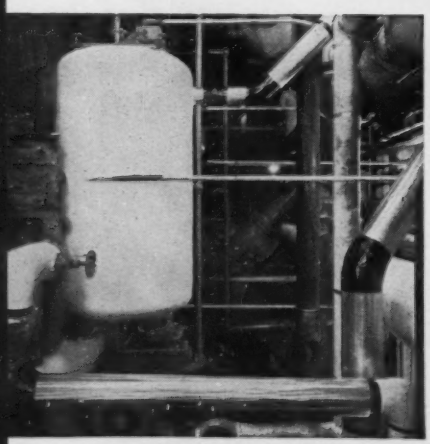


PROBLEM: Extreme hazard of fire from static electricity generated in machinery. Canvas jacketing could burn easily causing danger to men and machinery in plant.

SOLUTION: Childers Aluminum Jacketing installed. Fireproof—easily cleaned of oil to reduce fire hazard.

This Is Jacketing Shown In Coats & Clark, Inc. Plant On Opposite Page

Coats & Clark, Inc. Thread Mercerizing Plant, Toccoa, Ga., Joins Leading American Industries In Use of Childers Aluminum Jacketing.



PROBLEM: Costly replacement of insulated lines damaged by oil drippage and bumping by men and tools.

SOLUTION: Maintenance engineers replaced canvas jacketing with Childers Aluminum Jacketing. Easy to wipe clean . . . durable and resistant to abrasion and abuse. Maintenance cost reduced.

The Scott Paper Company, Chester, Pa., and nearly 1,000 other modern plants in this country have protected insulated lines with Childers Aluminum Jacketing.

Childers Aluminum Jacketing cuts maintenance costs. It needs no upkeep . . . retains its protective value for years. Because Childers Aluminum Jacketing needs no painting, it can actually pay for itself in this saving alone. And of course, this modern aluminum jacketing can be removed and replaced easily for line repairs.

Easy installation cuts cost even farther. Only tools needed are pliers and wedge. Economical strapping holds jacketing securely—allows easy removal.

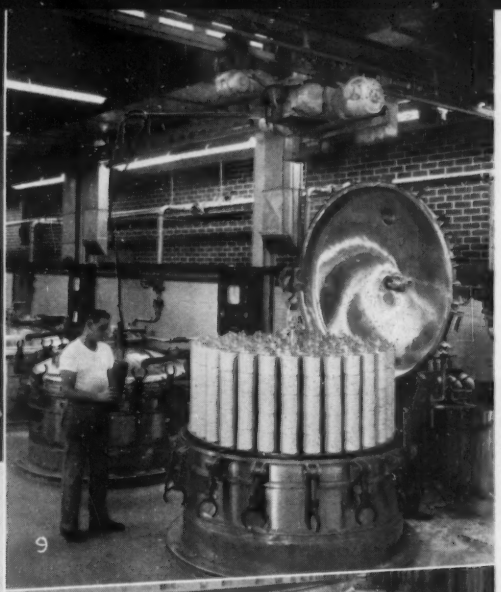
Try this low-cost protection in your plant. Write today for engineering data and information about how you can order a 400 sq. ft. roll to test on one of your insulated lines. No obligation. For full details write to: Childers Manufacturing Company, Department T1-1, 3620 West 11th Street, Houston 8, Texas.

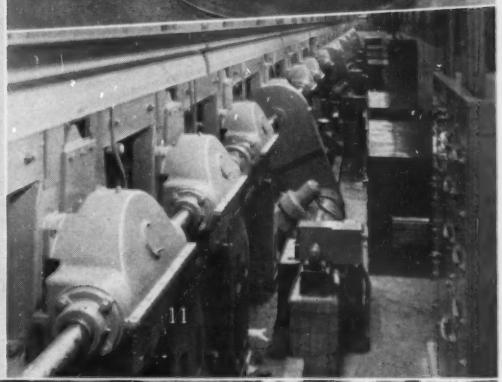
SPECIFICATIONS
Childers Light-Weight Aluminum Jacketing
Shipped in rolls. 4 ft. wide; 100 ft. long with or without moisture barrier. Aluminum of .006" thickness. Cut with straight edge and dull knife. Write now for full details and engineering data.

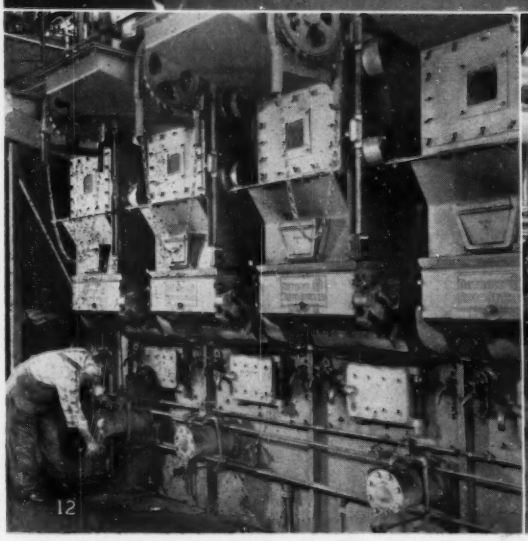
Jacketing in Coats & Clark, Inc. Plant by: Guy M. Beaty & Co. Charlotte, N. C.

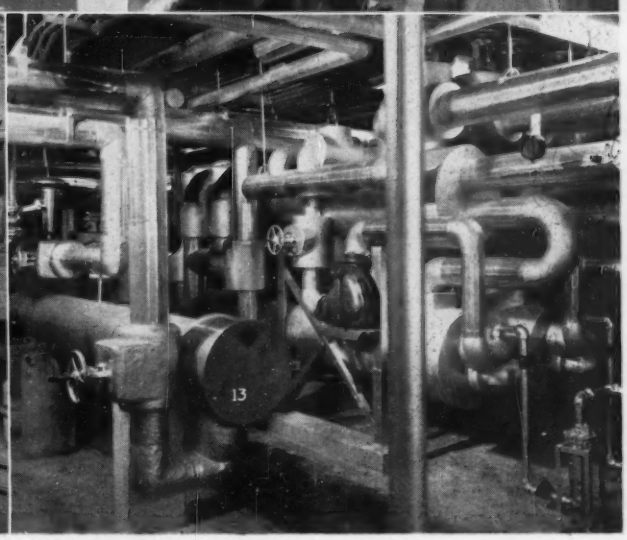
LOW COST Childers Aluminum Jacketing answers many problems in plants all over the country. It's light weight, easy to install—goes on with simple bands. Weather, water, heat and fire resistant—can be used and re-used for years.

(Advertisement)









8 Lift trucks for handling goods are equipped with 2-way radio for quick in-plant communications.

9. Package dyeing equipment is served by overhead handling equipment. Mixing balcony (see photo 5) is to right and above in this picture.

10. Instrument panel for caustic recovery system.

11. Close-up of specially engineered drive on mercerizer.

12. Automatic stokers on boilers.

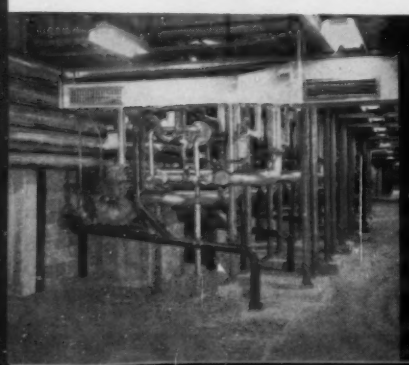
13. Aluminum jacketing insulates piping throughout the plant.

(Continued on page 186-I)

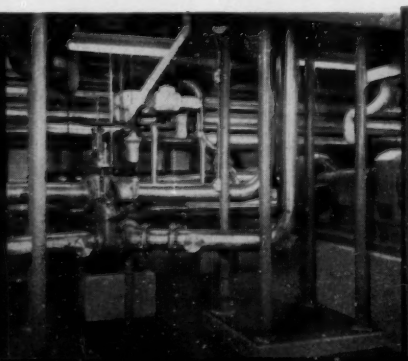
SMITH-DRUM

Installation of Package

Partial view of main dyehouse, showing dyeing machines in tandem to handle 1200 lb. batches. Package carriers in foreground are shown on trucks ready for loading. All floor openings were preformed when pouring concrete floor and are sealed to prevent seepage to the floor below. Note the clear work areas.



All piping, pumps and valves are located in the basement, immediately below the dyeing and bleaching kiers. Efficient planning and arrangement keep piping to a minimum. Note the use of heavy flanges and streamlined fittings.



All valves, motors and pumps are mounted on concrete piers at convenient working height for service and maintenance. Note uniformity of installation, with ample room for future expansion. Sealed openings in dyehouse floor insure a dry basement.

Completes World's Largest, Most Modern Dyeing, Bleaching and Drying Equipment

at Coats and Clark's New Toccoa Plant

Working in close coordination with the engineering staff of Coats and Clark, Inc. and their architects, Smith-Drum engineers have recently completed installation of equipment in the finest yarn processing plant in the world. We congratulate the far-sighted management of Coats and Clark for their long-range planning, which made it possible for the equipment and the building itself to be designed as a completely integrated plant. In no other way could the high degree of operating efficiency have been achieved. Smith-Drum engineers duplicated the physical layout in their own plant so that, on delivery, the machines were installed without any building changes.

The *Smith-Drum* equipment included 26 kiers for dyeing and bleaching, with complementary extracting and drying machines . . . as well as a battery of small lot and sampling units. All have automatically controlled indirect heating and cooling. All are capable of operating at temperatures up to 300 °F. and all vessels are ASME approved.

These photographs show the careful planning which provides for one-way flow of production, with no back-tracking of work. They show proper placement, so that all work areas are clear of obstructions . . . and far-sighted allowance for expansion and addition of equipment. They show how maximum production is being achieved with a minimum of operators, through the use of highly automatic, but simple, controls.

All of these factors play important parts in making it possible for this new plant of Coats and Clark, at Toccoa, Georgia, to produce more processed high quality yarn at lower cost than any other plant of its kind in existence.

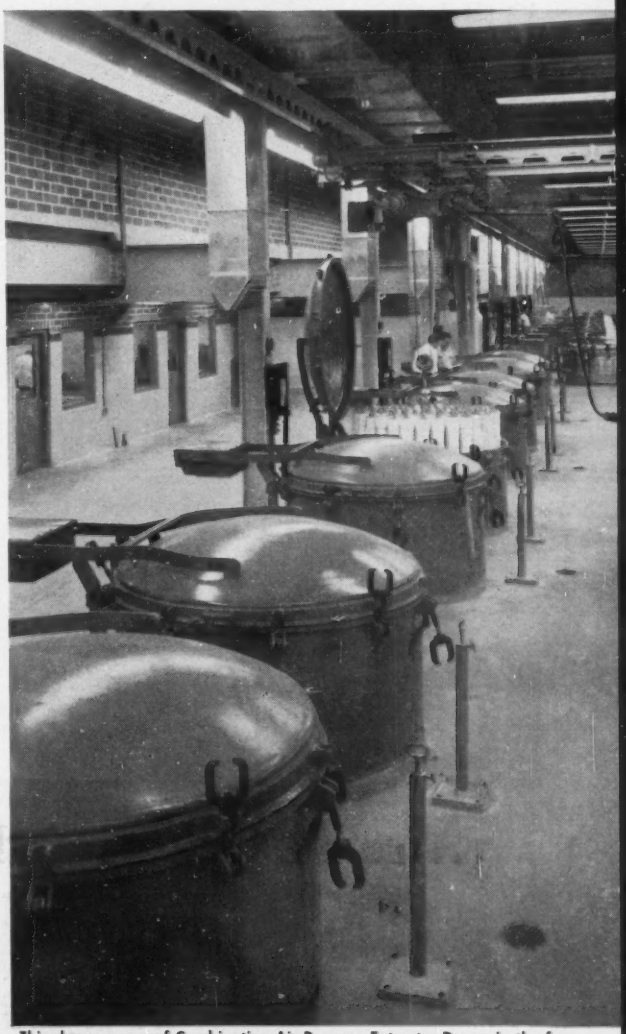
This same engineering skill and intimate knowledge of dyehouse problems is available to every processor of yarn . . . whether your production calls for *one* kier or *twenty-six* or more. We invite you to consult with our engineers on *any* dyeing, bleaching, extracting or drying problem . . . large or small.

SMITH, DRUM & COMPANY

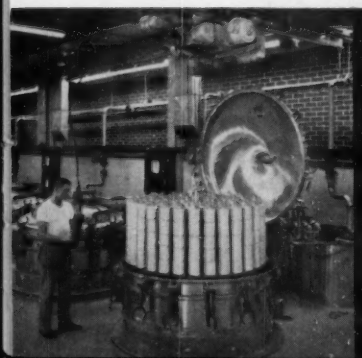
432 W. Allegheny Ave., Philadelphia 33, Pa.

Southern Sales Representatives: **PARROTT AND BALLENTINE**

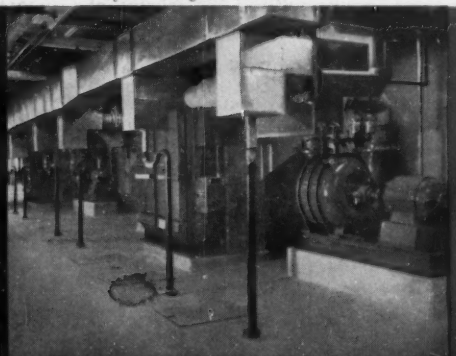
510 South Carolina National Bank Bldg., Greenville, South Carolina



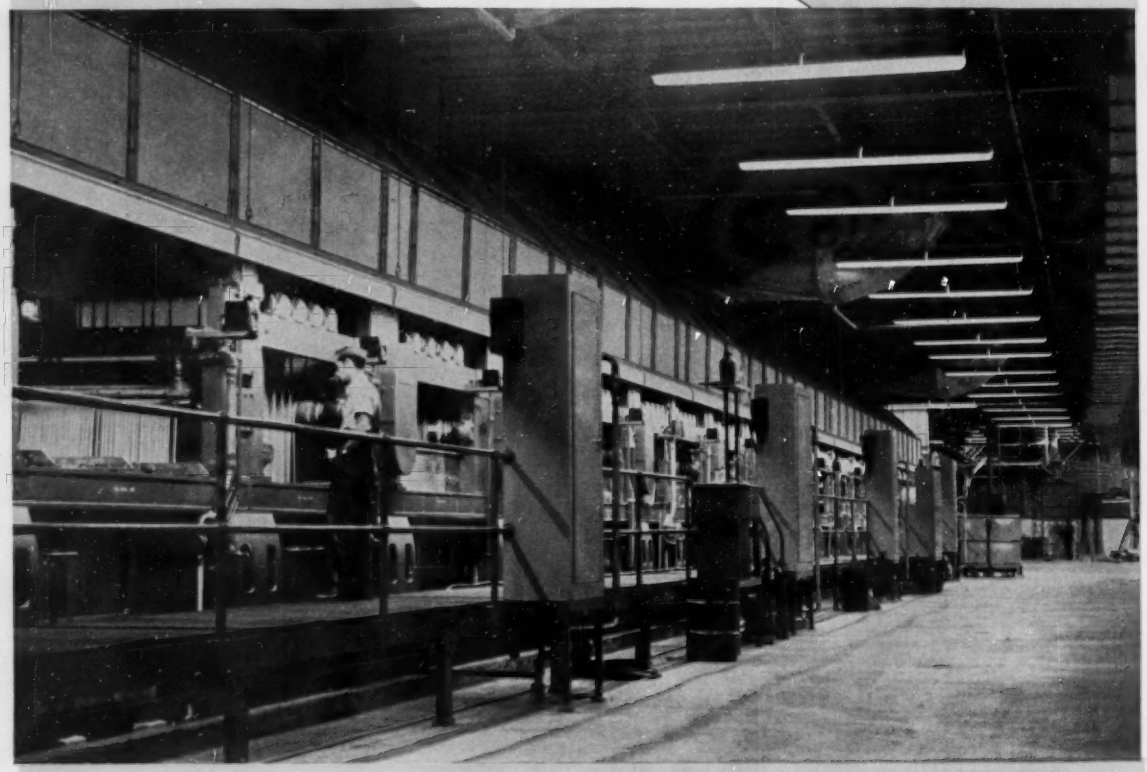
This shows a row of Combination Air Pressure Extractor-Dryers in the foreground. Packages are placed in these kiers on the same carriers on which they are dyed, a great saving in both handling costs and time. One man operates eight machines.



Yarn carriers are handled by an overhead crane system which speeds loading and unloading of all kiers. This, plus fully automatic controls, make it possible for one operator to handle many of these machines. Note the use of special spring-wound packages, another new development.



This shows blowers, filters, heaters and ducts for the combination Air Pressure Extractor-Dryers above. Note the compact arrangement. Location in the basement keeps working areas on floor above clear and free of blower noise.



...from a free-hand sketch and a scale model

It's the world's largest warp mercerizing range . . . and it all began with a free-hand sketch and a scale model whittled out of wood.

It takes seconds to tell it . . . but the engineering that made the new Coats & Clark range so successful is based on 130 years of machine-building experience. In August 1954, when the new Butterworth range was put to its severest test at maximum stretch and speed, results justified the months of tedious design and construction.

Coats & Clark's new thread mercerizer has finer controls, more precise adjustment and greater capacity than any such range built to date.

Whether you want a finishing range or a single machine — if your problem calls for complete cooperation between machine-builder and your own engineering staff — talk to a Butterworth man. Write us today.

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Bethayres, Pa.

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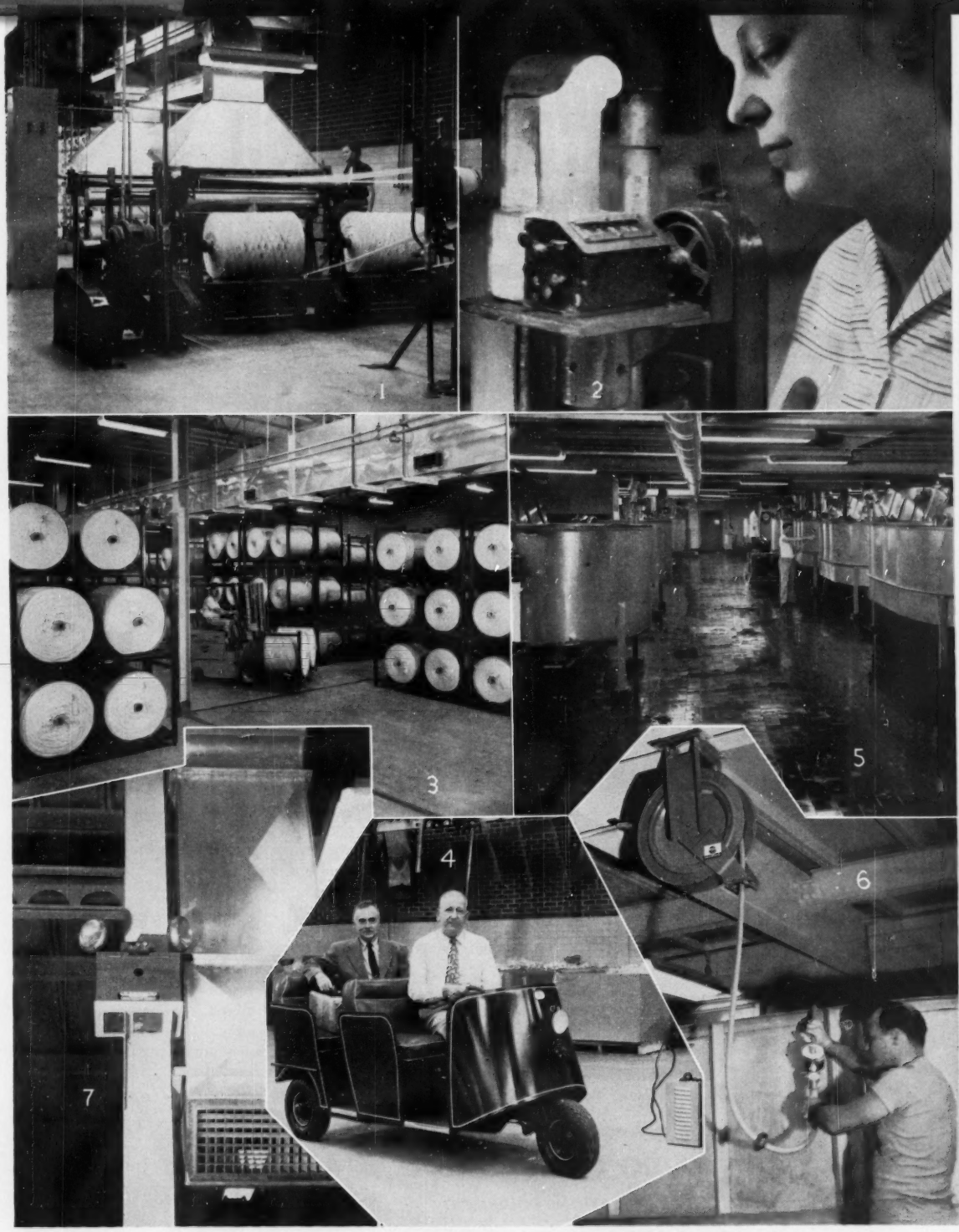
Representatives in Principal Cities of the World.

BUTTERWORTH



1. When making ball warps, the yarn is double singed. Reel on ball warper carries yardage counter with automatic cut-off and signal light.

2. Ball warper operator checks yardage recorder and cut-off.

3. Electric truck handles palletized stock in process.

4. Electric auto handles plant manager Al Morse and visiting fireman (TI's John Cook).

5. Mixing balcony serves (left) dyehouse, (right) bleach house. Employee is metering silicate of soda from hose on reel which conveniently reaches any mixing vat.

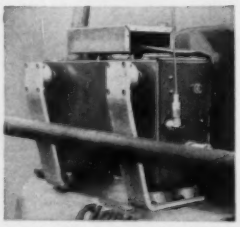
6. Close-up of silicate of soda metering arrangement.

7. Since building is air conditioned and windowless, power failure would leave building in complete darkness. These lights serve as temporary lighting; are run off storage batteries.

Cuts Waste Motion with RCA 2-Way Radio

Dispatcher of trucks and materials handlers assisted by a clerk can coordinate the efforts of truck drivers and labor crew from a centrally located office.

Foreman stops at truck to radio instructions to office—another one of the "extra benefits" reported.



Special "shock mounting" developed by RCA for this installation to cushion equipment against rough roads.

Less Than One Year's Pay-Off for Carfone Equipment Predicted at Rohm & Haas

Service peaks on Mondays and Fridays at the 46-acre plant of Rohm & Haas at Bristol, Pa. used to tax materials handling equipment beyond capacity. Empty runs wasted men and trucks, cut down on efficiency. Instant RCA 2-Way Radio communication with five fork lift and three stake trucks, commencing in March, this year, licked the problem. In addition, since using radio they have eliminated much "paper work" and now are using only one form instead of four.

Based on an estimated annual savings, the materials control area supervisor predicts that the equipment will pay for itself in less than a year.

RCA 2-Way Radio permits drivers to get started on new assignments at a moment's notice. Dispatcher can "pick-up drivers" at any location to efficiently eliminate wasted time and trucks. Even in high noise level areas, the two-way flow of information is fast, continuous and positive, thanks to directional re-entrant horns.

RCA *Carfone* equipment can do a similar job for you in handling materials efficiently in your plant . . . indoors or out. Precision manufacturing and built-in quality for which RCA is famous, are your guarantee of top performance in the toughest kind of operation. Mobile units fit almost any handy location, require a minimum of maintenance, permit quick servicing when needed. The RCA Service Company provides nation-wide service facilities if desired. Why not get complete information now?

RADIO CORPORATION of AMERICA

COMMUNICATIONS EQUIPMENT **CAMDEN, N. J.**

Radio Corporation of America
Dept. N-271, Building 15-1, Camden, N. J.
In Canada: RCA VICTOR Company, Limited, Montreal

☐ Please send information on RCA 2-Way Radio
☐ Have an RCA representative get in touch with me

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Our Engineering and Research Departments are equipped to design, and our shop to build, complete drying and ventilating systems. We also remodel and rebuild existing equipment.

Among our standard units are dryers for stock, cloth, carpets, warps and packages (for all types of fibres including glass) . . . heated with steam, gas, electricity, all using superheated water vapor to maximum advantage; Conditioning and Curing Units; Insulated Enclosures for all purposes where high temperatures must be maintained; Special Fans for supply and exhaust ventilation.

ANDREWS & GOODRICH, Inc.
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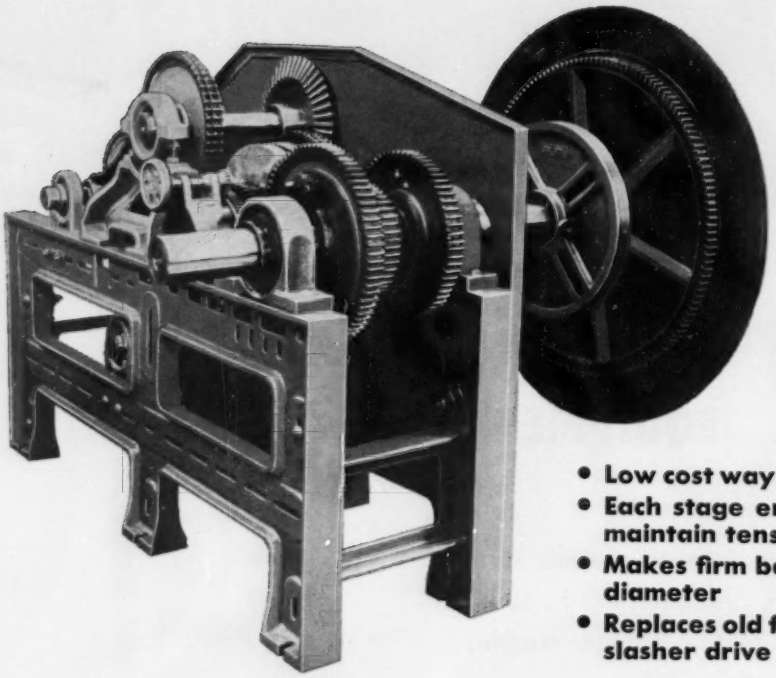
Boston 22, Mass.

Southern Representatives:
McSpadden and Scantland
Charlotte, N. C.



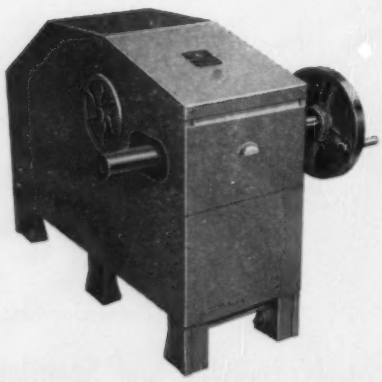
NEW WEST POINT 3-STAGE SLASHER FRICTION

- **Low cost way to get a firm warp beam**
- **Each stage engages automatically to maintain tension**
- **Makes firm beams up to 32" in diameter**
- **Replaces old friction without changing slasher drive**

Today's increased operating speeds and large loom beams often render the conventional slasher frictions inadequate. The West Point three-stage friction was designed to solve this problem without the high cost of replacing existing drives such as cone pulleys and variable speed transmissions.

The three-stage friction makes a good, firm beam without requiring the slasher tender to adjust weights or handwheels as the beam diameter increases. It is a neat-appearing, smooth-operating mechanism made of rugged precision parts. The entire mechanism is mounted in ball bearings. A 3" diameter arbor provides a rigid support for heavy beams.

As the name implies, this West Point drive is three frictions in one, each geared to the beam arbor at a different ratio. As the beam turns, the second and third stages engage automatically at predetermined beam diameters to maintain tension *and* to reduce the heating and power loss that is inherent in the conventional friction.



Friction with Safety Enclosure in Place

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SPECIAL TEXTILE MACHINERY AND REPAIR PARTS
SIZE BOXES, KETTLES AND PUMPS
BIG BEAM EQUIPMENT FOR LOOMS
LOOM BEAMS, BARRELS AND BEAM HEADS
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2-1 "Dyeing Synthetic Fibers". Brochure giving a comprehensive, detailed analysis of the methods and materials available for dyeing synthetic fibers. Write General Dyestuff Co., 435 Hudson St., New York 14, N. Y.

2-2 Certified Climate Airchanger System — Bulletin describes Certified Climate Airchanger System as used with direct humidification for partial or complete air conditioning. Write Parks-Cramer Co., Fitchburg, Mass.

2-3 Electronic Select-A-Spede. Illustrated brochure describes electronically controlled wide speed range drive, in ratings ¾ through 15 HP, AC. Write The Louis Allis Co., 427 East Stewart, Milwaukee, Wisconsin.

2-4 Big Savings on Finished Machine Parts. 4-Page folder describes "Street Oilite." Parts have high degree of Ductility, greater Impact Resistance and Fatigue Strength. Write Amplex Division, Chrysler Corp., P. O. Box 2718, Detroit, Michigan.

2-5 Casters and Wheels. Catalog gives complete descriptions on full line of industrial casters and wheels. Features patented "LOCKWELD' Steel Casters Without A Kingpin" both Single and Double Ball Race. Write The Fairbanks Co., 393 Lafayette St., New York 3, N. Y.

2-6 Short Loop Drier. Booklet describes origin, development and features of the Haas Short Loop Drier, adaptable all fabrics, especially fine counts. Write Abteilungreklame, Firma Maschienfabrik Friedrich Haas, G.M.B.H., Remscheid-Lennep, Deutchland, Germany.

2-7 Corrosion Control. New 28-page catalog describes how to control corrosion with stainless tubing and pipe. Write The Carpenter Steel Co., Alloy Tube Division, Union, New Jersey.

2-8 Leather Aprons and Tapes. 16-Page book gives dimensional standards and installation instructions covering leather aprons and tapes for use on textile machinery. Write Textile Leather Div., National Industrial Leather Association, 320 Broadway, New York 7, New York.

2-9 Flexible Rubber Doors. Illustrated booklet gives application, engineering data and installation instructions on "The Door that can TAKE it . . . because it GIVES." Write Candor Engineering Co., P. O. Box 210, Montclair, N. J.

2-10. Indicating, Recording and Controlling Instruments. New 4-Page bulletin covers various types of industrial indicating, recording and controlling instruments. Write United States Gauge, Division of American Machine and Metals, Inc., Sellersville, Pa.

2-11 Simplified Anchoring of Textile Machines. Booklet describes how no bolts or lag screws are needed to insure vibration control and noise suppression with UNISORB. Write The Felters Co., 210 South Street, Boston 11, Mass.

2-12 New D-C. Motor. Booklet describes in text, pictures and charts new Reliance Super 'T' Line D-C. Motor with Dynamic Response. Write Reliance Electric and Engineering Co., 1076 Ivanhoe Road, Cleveland 10, Ohio.

2-13 Sheet Metal Work. Pamphlet describes spinning cylinders, aspirators, card screens, sheet metal specialties. Write Gastonia Textile Sheet Metal Works, Inc., 222 East Long Avenue, Gastonia, N. C.

2-14 Traveling Cleaners. 4-page bulletin describes the improved Parks-Cramer Frame and Room Cleaners including the Underframe and Floor Sweepers. Write Parks-Cramer Co., Fitchburg, Mass.

2-15 Steel Pulleys. Pictorial review of American Steel Pulleys, their manufacturing processes and some of their end uses. Textile pulleys are featured. Write American Pulley Co., 4200 Wissahickon Ave., Philadelphia 29, Pa.

2-16 Innovation in Textile Drying. Booklet by J. O. Ross gives details on Steam or Gas "Hot Air" Slasher for high speeds at low cost. Write J. O. Ross Engineering Corp., 444 Madison Ave., New York 22, N. Y.

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4. HOW FACTORING CAN INCREASE PROFITS —Describes how factoring works out in keeping clients' capital liquid and attitude of factor toward checking credits, including typical balance sheet.— COMMERCIAL FACTORS CORP., New York City.

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17. A FAIR DAY'S PAY AND IN RETURN A FAIR DAY'S WORK — 8-page booklet outlining the services offered to industry for the proper utilization of labor, material and equipment, and the resulting advantages for both labor and management. — AMERICAN ASSOCIATED CONSULTANTS, INC., 250 Park Ave., New York, N. Y.

19. INDUSTRIAL BUILDING — A 32-page booklet entitled "U.S.S. 12, U.S.S. 17 Stainless Steel Walls and Roofs for Industrial Buildings," is now available for distribution. This publication illustrates the use of type 410 and type 430 Stainless Steel Sheets in the construction of industrial and semi-industrial buildings. — U. S. STEEL CO., 525 William Penn Pl. Pittsburgh 30, Pa.

22. THE WONALANCET WAY — Is the title of an editorial booklet published five times a year and deals with current problems which appear worthwhile at the time they are written. — WONALANCET COMPANY, 128 Burke St., Nashua, N. H.

100. MOTION CONTROL WITH SILENTBLOC— Brochure describes advantages of General Tire Company's Silentbloc method of protecting delicate instruments, reducing maching vibration, etc.—Write THE GENERAL TIRE CO., Industrial Products Div., Akron, Ohio.

PLANT & PLANT MAINTENANCE . . .

102. "TANK TALK" — Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc said. — R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

103. HUMIDIFICATION, EVAPORATIVE COOLING — Bulletins available displaying AMCO automatic self-cleaning atomizers, controls, and evaporative cooling equipment. — AMERICAN MOISTENING CO., 260 W. Exchange St., Providence, R. I.

106. FINNELL COMBINATION SCRUBBER-VAC — Illustrated literature gives complete specifications and describes various methods of combination-machine-scrubbing, including method recommended for cleaning oily floors. — FINNELL SYSTEMS, INC., 1309 East St., Elkhart, Indiana.

108. MAPLE FLOORING — Booklet describing finishing of Northern Hard Maple Flooring — list of M.F.M.A.-approved heavy-duty floor finishes. — MAPLE FLOORING MANUFACTURERS ASSOCIATION, Pure Oil Bldg., 35 East Wacker Dr., Chicago 1, Ill.

117. CLEANING SYSTEMS — Booklet entitled "Certified Climate and Cleaning Systems" gives latest information on system. Products and uses fully discussed with two story layout of Certified Climate central station air conditioning system. — PARKS-CRAMER CO., Fitchburg, Mass., and Charlotte, N. C.

110. UNBRAKO STANDARDS — Catalogue by Standard Pressed Steel Co. describes in pictures and text the company's line of Unbrako precision threaded fasteners. Several arpplications of each produce, are indicated in line drawings to suggest hundreds of others and to stimulate the imagination, of design engineers. — STANDARD PRESSED STEEL CO., Jenkintown, Pa.

113. COTTON MILL EQUIPMENT — This book traces pictorially the steps in processing raw cotton into finished cloth. It shows the equipment needed for all phases of production, as well as containing a "Useful Information" section on Power Factor Correction, Lighting, Circuit Protection, etc. — WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

127. SOLENOID VALVES — Bulletin "V" lists sizes from 1/2 inch to 2 inches; valves for normally open or closed service; stainless steel or Jenkins disc seats; three way solenoid valves, etc.; typical installations. — THE JOHNSON CORP., Three Rivers, Mich.

129. AIR CONDITIONING AND HUMIDIFICATION — Catalog section 101 lists and briefly describes each item of the complete Bahnson line of equipment for textile mill air conditioning and humidity control. — THE BAHNSON COMPANY, Winston-Salem, N. C.

131. "AIR PROCESSING" — Set of three bulletins showing real meaning of the term, where it can be used, the requirements for a successful system, etc. — J. O. ROSS ENGINEERING CORP., 444 Madison Ave., New York 22, N. Y.

135. COLOR CONDITIONING — Booklet illustrated in color describes how Du Pont color conditioning puts color to work for you. Many ideas on safety brought out which color can aid. — E. I. DU PONT DE NEMOURS & CO., INC., Finishes Div., Wilmington 98, Delaware.

138. METAL CONVEYOR BELTS — Recent catalog describes and illustrates Ashworth's entire range of manufacturers, including the new Flat Wire Belt design and application, along with their Woven Wire constructions and Positive Drive Chain Edge belts. — ASHWORTH BROS., INC., Metal Products Div., Fall River, Mass.

148. FUNCTIONAL GLASS BLOCK DATA — Folder shows in detail daylighting function of Light-directing and Light-diffusing Functional Glass Blocks. — PITTSBURGH CORNING CORP., 307 4th Ave., Pittsburgh 22, Pa.

150. RIHCO HUMIDIFIERS AND COOLING SYSTEMS — Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems. — ALDRICH MACHINE WORKS, Greenwood, S. C.

151. INDUSTRIAL BRUSHES — Illustrated booklet of industrial brushes featuring textile usage on shears, printing machines — also flock, raising and cylinder brushes. — M. W. JENKINS SONS, INC., 444 Pompton Ave., Cedar Grove, N. J.

153. LAMINATED TEXTILE PLASTICS — Booklet by Synthane Corporation shows variety, application, and advantages of laminated plastic parts and supplies for the textile industry. — SYNTHANE CORPORATION, Textile Division, Oaks, Penna.

154. AIR CONDITIONING FOR THE TEXTILE INDUSTRY — Booklet shows advantages of air conditioned mills in better products and more efficient workers, and gives values of White & Co. air conditioning in particular. — WHITE & CO., INC., 1440 S. Tryon St., P. O. Box 533, Charlotte, N. C.

158. FLOATING BOTTOM ROVING TRUCK — Booklet by Excel Textile Supply shows advantages of roving truck with automatically adjusted bottom. Eliminates reaching over into truck by keeping load level within easy reach of operator. — EXCEL TEXTILE SUPPLY CO., Lee Ave., Lincolnton, N. C.

161. AUTOMATIC CLEANING EQUIPMENT — Complete booklet by American MonoRail shows working details and advantages of the Tri-Rail Cleaner, a great improvement over the original unit. — AMERICAN MONORAIL CO., 13107 Athens Ave., Cleveland 7, Ohio.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE — Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as preserving textile mill floors. — G. H. TENNANT COMPANY, 2530 N. Second St., Minneapolis 11, Minn.

169. MACHINE BRUSHES — Illustrated Folder shows many types of machine brushes and describing their particular use for printing, washing, brushing, singeing, and shearing is sent free upon request. — INDUSTRIAL BRUSH COMPANY, INC., Woodside Avenue, Little Falls, New Jersey.

173. BLOWERS AND EXHAUSTERS — Bulletin No. 3014-D describes types "E" and "RE" electric blowers and exhausters. Uses and full description of each with detail drawings. — BUFFALO FORGE CO., 490 Broadway, Buffalo 5, N. Y.

174. PAINT STRIPPING BOOKLET — Illustrated booklet providing helpful data on latest materials and methods for simplified stripping of paint. Methods described include: (1) steam gun; (2) hot flow-on; (3) cold spray; and (4) tank immersion. — OAKITE PRODUCTS, INC., 22 Thames St., New York 6, N. Y.

176. STOKERS AND BOILERROOM EQUIPMENT — For information on boilerroom problems, improvements and apparatus. — McBURNEY STOKER CO., 2110 Peachtree Rd., Atlanta, Georgia.

179. BETTER WAYS — Form 2020, condenser catalog of standard and special model Toledo Industrial Scales that are being used in receiving, shipping, and production operations by all industries including the textile field. — TOLEDO SCALE CO., Box 97, Toledo, Ohio.

181. AIR FILTRATION — Bulletin 234 describes and illustrates the Auto-Airmat, which is the automatic Dry-Type air filter. Principle of operation, performance characteristics, construction and installation fully discussed. — AMERICAN AIR FILTER COMPANY, INC., 215 Central Ave., Louisville 8, Ky.

188. PROGRESSING-CAVITY PUMPS — A new principle in pumps. Self-priming, positive displacement, uniform flow features discussed. — ROBBINS & MYERS, INC., Pump Div., Springfield, Ohio.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

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203. TREADED LEATHER BELTING — This 16 page booklet describes Houghton's line of patented, specially treaded leather belting for all types of power transmission. Booklet includes valuable engineering and maintenance section. — E. F. HOUGHTON & CO., Philadelphia, Pa.

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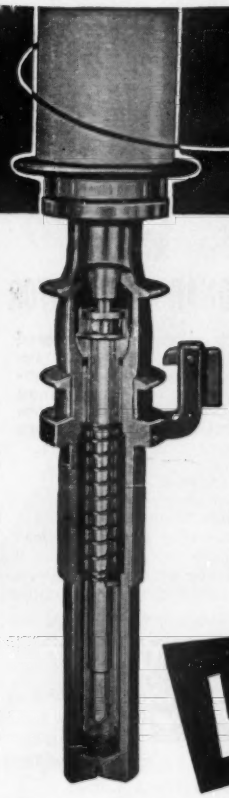

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212. GATES TEXTILE ACCESSORIES — Handy pocket-size catalog BHM-7, fully illustrated, gives specifications of Gates textile accessories including pickers, lug straps, check straps, cone belts, evener belts, harness straps, take-up roll covering, and others. — THE GATES RUBBER COMPANY, 1001 Broadway, Denver 17, Colo.

218. BALL BEARINGS FOR TEXTILE MACHINERY — A 40-page catalog illustrating Fafnir Ball Bearing units for replacement or new applications in all phases of textile processing. — THE FAFNIR BEARING CO., New Britain, Conn.

222. AUTOMATIC PRODUCTION CONTROL — Booklet by Reeves Pulley Company, shows application of many automatic processes and controls to the textile industry. Well illustrated, it contains engineering data quite useful to anyone interested. — REEVES PULLEY COMPANY, Columbus, Indiana.

227. WOOLEN AND WORSTED MILL ELECTRICAL EQUIPMENT — Booklet by Westinghouse follows processes through the mill and shows application and advantages of Westinghouse equipment.— WESTINGHOUSE ELECTRIC CORP., Box 2099, Pittsburgh 30, Pennsylvania.

229. DODGE GENERAL POWER TRANSMISSION MACHINERY — Catalog describes various types of power transmission apparatus by Dodge. Gives specifications, sizes, applications, and prices. Very comprehensive. — DODGE MANUFACTURING CORP., Mishawaka, Indiana.

235. JOHNSON LEDALOYL BEARING BRONZE — Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings. — JOHNSON BRONZE COMPANY, New Castle, Pa.

237. MOTOR CONTROL — Brochure gives description and engineering data on the Cutler-Hammer Motor Control for roving and spinning frames. Users listed and advantages discussed. — CUTLER-HAMMER INC., Milwaukee, Wisc.

238. TEXTILE LEATHERS CATALOG — Catalog by J. E. Rhoads & Sons gives characteristics and advantages of Rhoads "Tannate" leathers. Complete line is listed and described, and tips for correct installation. Copiously illustrated. — J. E. RHOADS & SONS, 35 North Sixth St., Philadelphia, Pa.

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253. TEXTILE LUBRICATION — 'Lubrication" a magazine published by the Texas Co. is available. Shows methods and means of lubricating chain drives in very comprehensive form. — THE TEXAS CO., 135 East 42nd St., New York 17, N. Y.

256. METERED LUBRICATION — Bulletin 6A has 12 illustrated pages showing how central lubricating systems are applied to combers, roving frames, winders, knitters, looms, etc. — BIJUR LUBRICATING CORP., Rochelle Park, N. J.

259. SUNOTEX MACHINE OIL — Booklet describing this machine oil as being "custom-made" for the textile industry. Advantages discussed and pictures of uses which includes knitting machinery.— SUN OIL COMPANY, Philadelphia 3, Pa.

262. SMALL PRECISION METAL PARTS — Catalog by Torrington Company describes many special precision metal parts made by its Specialties Division. — THE TORRINGTON COMPANY, Specialties Division, 500 Field Street, Torrington, Connecticut.

265. SERVICE PROCEDURE FOR BALL BEARINGS — A helpful manual for maintenance engineers giving helpful hints on disassembly, inspection, cleaning, lubrication, and replacement of ball bearings in any mechanism. — NEW DEPARTURE, Division of General Motors Corp., Bristol, Conn.

266. SILICONE LUBRICATION — Bulletin BG2-DC, describes properties of silicone greases used in motors at high speeds and temperatures, on oven conveyors, tenter frames, can dryers, etc. Decrease by 10 to 1 in re-lubrication requirements described. — DOW-CORNING CORP., Midland, Mich.

277. SPECIAL TEXTILE MOTORS — Bulletin 51B6055A describes special features of "Quick-Clean" motors, including discussion on free air flow, prelubricates bearings, regid cast iron frame and double insulation. — ALLIS-CHALMERS MFG. CO., Milwaukee, Wis.

280. NEW MOTOR CONTROL — 8-page promotional folder gives complete description of the new Arrow-Hart Type "LM" Loom Switch, said to be the first manual, across-the-line starter designed specifically for textiles. — INDUSTRIAL CONTROL DIVISION, Arrow-Hart and Hegeman Electric Co., 103 Hawthorne Street, Hartford 6, Conn.

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314. MOISTURE CONTENT CONTROL — Bulletin F-3156 giving details of features and benefits of moisture equipment control for slashers and textile applications. — BARBER-COLMAN CO., Rockford, Ill.

321. RED-RAY BURNERS — Bulletin describing use of Red-Ray Burners in preheating partial drying to increase capacity of frame. — RED-RAY MFG. CO., 445 W. 45th St., New York, N. Y.

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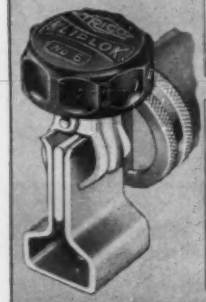

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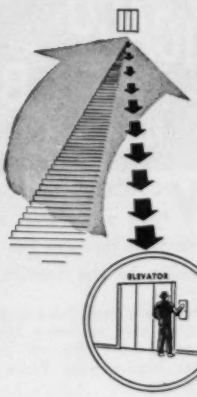

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422. WARPER BEAMS — Folder describes the high speed for rayon tire cord, cotton warper beams, cast aluminum end supports and large diameter heads. — U. S. BOBBIN & SHUTTLE CO., Lawrence, Mass.

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445. ROLLER BEARING SPINDLES — Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described. — THE MARQUETTE METAL PRODUCTS CO., 1145 Galewood Ave., Cleveland, Ohio.

447. CONE WINDER — Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and tubes for dyeing and twister supply. — FOSTER MACHINE COMPANY, Westfield, Mass.

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467. CARD CLOTHING — 8-page booklet by Benjamin Booth Company describes Strip-O-Matic Card Clothing and its advantages. — BENJAMIN BOOTH COMPANY, Allegheny Avenue & Janney Streets, Philadelphia, Pennsylvania.

469. SHORT CUT TO STAPLE FIBER SPINNING — Color brochure shows the ten steps in operation of the Turbo Tow Stapler, gives technical details and diagrams. — TURBO MACHINE COMPANY, Lansdale, Pa.

471. FACTS ABOUT YOUR FLYERS AND SPINDLES — Booklet by Ideal Machine shops shows how smooth Flyer and Spindle operation can help produce higher and more efficient output, good quality yarn, minimum wear, and larger bobbins.— IDEAL MACHINE SHOPS, Bessemer City, N. C.

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475. TEXTILE ROLL COVERINGS AND MILL SUPPLIES — Color Booklet by Armstrong shows and describes their complete line of textile roll coverings, including also loom supplies, mill supplies, Roll covering for Cotton, Silk and Synthetic and Woolen and Worsted systems. An excellent guide book.— ARMSTRONG CORK CO., Industrial Div., Lancaster, Pa.

476. TEXTILE FIBER OPENER FOR COTTON, SYNTHETICS, WOOL — New brochure by Cen-Tennial Cotton Gin Co. gives complete data on the Cen-Tennial Opener which incorporates improvements on the original SRRL Opener. Complete operating procedure is described. — CEN-TENNIAL COTTON GIN CO., Columbus, Ga.

477. METALLIC CARD CLOTHING — Color booklet by Platt Brothers describes their Patent Metallic Card Clothing. Well-Illustrated it gives applications, types of clothing for all fibers, etc. — TEXTILE INDUSTRIES, 806 Peachtree Street, Atlanta, Georgia.

478. TIPS ON CARDING PROCEDURE—Monthly bulletin by Ashworth Brothers includes many useful tips and advice on carding operation, maintenance and care and is available to anyone interested. Bulletin is a reprint of section appearing on green paper in this issue. — ASHWORTH BROTHERS, Fall River, Mass.

501. LOOMS — An accordion type folder is available entitled "Unfolding to You the World's Largest Line of Looms." Information on all types fully discussed. — CROMPTON & KNOWLES LOOM WORKS, Worcester 1, Mass.

502. COUNTING AND MEASURING DEVICES— Condensed textile catalog illustrating and describing pick counters, hank counters, cut meters, measuring counters. Wide range of counting devices for production recording on all types of textile machinery. — VEEDER-ROOT, INC., Hartford, Conn.

503. WEAVER'S KNOTTER — A catalog on the Boyce Weaver's Knotter giving a few instructions as to its use, recommendation as to the proper type knotter for the various types of yarns, and the spare parts that go to make up the knotter. — A. B. CARTER, INC., Gastonia, N. C.

504. LOOM SUPPLIES — Literature describing complete line of straps, strapping, pickers, dobby cords, sticks, binders, bumpers, brake lining and allied products. — E. H. JACOBS NORTHERN DIV., THE BULLARD CLARK CO., Danielson, Conn.

WEAVING, SLASHING . . .

506. SLASHING HINTS — A 20-page booklet offering helpful hints on warp sizing. Subjects: Size cooking equipment, section beam tension, sizing selvages, cooking use of split rods, weighing for the mix, tips on cooking equipment, storage in kettles, etc. — SEYDEL-WOOLLEY & CO., 748 Rice St., N. W., Atlanta, Ga.

507. VARIABLE SPEED SLASHER DRIVE — Reeves bulletin G-503 describes their Servo-Control slasher drive which automatically controls tension from creel to beam, and which controls the stretch in the slasher. — REEVES PULLEY CO., Columbus, Ind.

508. LOOM PRODUCTION CHARTS — Convenient celluloid card showing yards per loom per week of 40 hours at various loom speeds. — RALPH E. LOPER CO., Greenville, S. C.

509. MULTI-MOTOR SLASHER DRIVES—Booklet designed to bring the descriptive information on multi-motor slasher drives up to date, and emphasize the improvement in the drive through the use of Rotorol for the control of winding tension. —WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

511. ALUMINUM BEAMS — Catalog No. 1-21 describes Hayes magnesium and aluminum specialties for the textile industry. Illustrates this company's beams that are one-third the weight of conventional types. — HAYES INDUSTRIES, INC., Jackson, Mich.

517. LOADING SYSTEM — Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, contains installation photo, features, specifications, and prices. — THE FOXBORO COMPANY, Foxboro, Mass.

521. STEEL WARP BEAMS — 20 page Catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broad-loom and narrow fabrics. Also Textile Machinery Specialties. — MILTON MACHINE WORKS, INC., Milton, Pa.

524. JOHNSON WARP SIZES — 12 page fully illustrated booklet, describing the 7 cylinder sizer with stretch indicator and finger-tip control of stretch. — point-by-point analysis. — CHARLES B. JOHNSON MACHINE WORKS, Piercy & Holsman Sts., Paterson, N. J.

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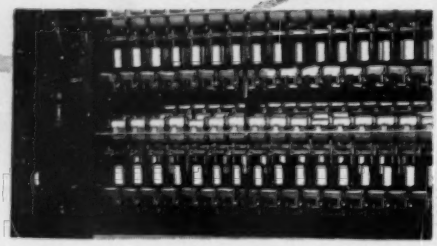

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530. ROTARY UNIONS — New catalog shows how to cut costs, get better sealing on can dryers, slashers, calenders, etc. Catalog No. 500 entitled "Where Good Connections Count." — PERFECTING SERVICE COMPANY, Atando Ave., Charlotte, N. C.

531. ALL PURPOSE BALL BEARING ROTARY UNION—Booklet gives descriptions, typical installation, engineering data with complete illustrations.—PERFECTING SERVICE CO., 332 Atando Avenue, Charlotte, N. C.

536. HOMOGENIZER IMPROVES SLASHING — Pamphlet by Manton-Gaulin Manufacturing Company shows how mechanical conversion of size by the Gaulin method produces better size. Gives installation pictures and specifications. — MANTON-GAULIN MANUFACTURING COMPANY, INC., Everett, Massachusetts.

537. WEST POINT'S HOT AIR SLASHER — Bulletin describes advantages and capacities of new hot air slasher by West Point Foundry and Machine Works. Detailed specification included. — WEST POINT FOUNDRY AND MACHINE WORKS, West Point, Georgia.

538. AIR SLASHER DRYER — Pamphlet by Proctor & Schwartz shows construction and operating details of the Proctor Air Slasher Dryer. Advantages listed and cut-away view shown. — PROCTOR & SCHWARTZ, INC., 7th St. and Tabor Rd., Philadelphia 20, Pa.

539. AUTOMATIC REGAIN CONTROL OF RAYON AND SYNTHETIC FIBRE SLASHING — Technical booklet by Minneapolis-Honeywell gives data on ther electronic, multi-range "Moist-O-Graph system for controlled regain. — MINNEAPOLIS-HONEYWELL REGULATOR CO., Station., 64, Phila. 44, Pa.

540. SLASHING EQUIPMENT — Brochure by Tower Iron Works shows different types of slashing equipment, enumerating characteristics and advantages of each. — TOWER IRON WORKS, 50 Borden St., Providence 3, R. I.

545. NOPCO CHEMICAL DATA SHEETS — Now available are Nopcostats, Nopco Sizes N and D. Important points in Warp Sizing, Interpretatoin of Analysis, Wetting Agents, Balanced wool and worsted oils, Acetate Warp Sizing, Viscose warp sizing, Rayon soaking. — NOPCO CHEMICAL CO., Harrison, N. J.

601. CONTINUOUS PEBOXIDE BLEACHING RANGES — Booklet gives illustrations and describes uses and gives specification of Ranges. — RODNEY HUNT MACHINE CO., 49 Mill St., Orange, Mass.

602. CONTROLLED VAT DYEING — Calco technical booklet No. 828 discusses Stabilization of Vat Dyes at Elevated Temperatures, Instrumental and Analytical Measurements, Lenco Potentials. — AMERICAN CYANAMID CO., Calco Chemical Division, Bound Brook, New Jersey.

606. HYDRAULIC POWER UNITS — Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operating of hydraulic calenders, presses, hydraulic controls, etc. — B. F. PERKINS & SON, INC., Holyoke, Mass.

DYEING, FINISHING CLOTH ROOM . . .

608. WASHERS FOR SCOURING, BLEACHING, ACIDIFYING — Well-illustrated booklet shows how Sargent's modern, high-capacity, continuous process washers can help maintain quality and decrease costs. Contains operation diagram and good commentary on construction. — C. G. SARGENT'S SONS CORPORATION, Graniteville, Massachusetts.

610. PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY — Illustrated, descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes Pre-Boarding and Automatic Boarding Machines for hosiery. — PROCTOR & SCHWARTZ, INC., 7th and Tabor Rd Philadelphia, Pa.

615. HIGH PRODUCTION EXTRACTOR FOR RAW STOCK—YARN—HOSIERY — Descriptive bulletin and full information on automatic Twintainer Extractor with bottom-unloading removable baskets. Machine replaces three conventional extractors, lowers labor costs. — FLETCHER WORKS, INC., Philadelphia, Pa.

616. FINISHING DRIVES — 32-page booklet covers complete drives Westinghouse has engineered for the textile finishing industry. Describes all types of finishing ranges and discusses advantages of Westinghouse drives for these installations. "Packaged" drives for batch processes covered. — WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

617. AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING — Illustrated folder describes the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operation. — TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

620. REGENERATION OF ZEOLITE WATER SOFTENERS — Booklet explains advantages of International's Lixate Process in regeneration of zeolite water softeners. Shows how it cuts costs and does a better job. — INTERNATIONAL SALT COMPANY, INC., Scranton, Pennsylvania.

623. SELVAGE GUIDER — The Marshall and Williams positive overfeed and selvage guider is described in a brochure as being developed to meet the most modern requirements of the textile finishing industry. Full description, pictures and advantages discussed. — MARSHALL AND WILLIAMS CORPORATION, 46 Baker Street, Providence 5, R. I.

627. SINGLE APRON STOCK DRYERS — Folder presenting the latest idea in automatic drying which every mill having drying problems can profitably use to meet modern manufacturing conditions. — C. G. SARGENT'S SONS CORP., Graniteville, Mass.

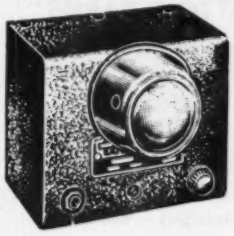
628. TREATMENT OF SYNTHETIC TEXTILE FINISHES — High speed drying and curing of synthetic finishes by means of far-infrared radiation is covered in a new 22 page folder entitled "The Textile Report" by EDWIN L. WIEGAND COMPANY, 7700 Thomas Blvd., Pittsburgh 8, Pa.

631. ELIMINATE DYE-BATH SHOCK — Data sheet by Foxboro shows how woven fabrics and hosiery may be protected from Crow's-feet, uneven shade, creasing caused by too rapid cooling of goods. — Write for data sheet, 220-60, FOXBORO COMPANY, 487 Neponset Ave., Foxboro, Mass.

632. LUG STRAP WASHERS — Series 1-C illustrated bulletin detailing right and wrong application and use of washers. E. H. JACOBS NORTHERN DIV., Danielson, Conn.

637. BALL BEARING TURN TABLE — Leaflet describing this 48" diameter steel turn table for use in mills where the cloth is delivered in rope form to trucks and the trucks are placed in position ahead of a Scutcher or Cloth Opening Machine. Advantages discussed. — BIRCH BROTHERS, INC., 32 Kent St., Somerville, Mass.

638. DYEING AND FINISHING MACHINES — Booklet by James Hunter Machine Company shows pictures, applications, and advantages of following: "Vapo Jet" Dryer; "Hunter Dye Beck"; "Flexreel" Rope Washer; Continuous Cloth Washer; Model "S" Dye Kettles; Compartment Washer; Fulling Mill; Top Dyeing Machine; "Uniflow" High-speed Tenter Dryer; Cloth Carbonizer. — JAMES HUNTER MACHINE CO., North Adams, Mass.



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639. ROTARY DYEING MACHINE — Booklet No. 425 illustrating the features of these stainless steel machines used for dyeing hosiery, hats, gloves, socks, etc. — SMITH, DRUM & CO., Allegheny Ave. at 5th St., Philadelphia 33, Pa.

653. GUIDERS AND TENSION DEVICES — Illustrated and described are the Mount Hope Precision Guiders and open width Tension Devices used for accurate, straight line guiding of open width goods. Bulletin 5G-PG. — MOUNT HOPE MACHINERY CO., 15 Fifth St., Taunton, Mass.

655. PAPER TUBES FOR YARN AND CLOTH— Complete data to help you solve your paper tube problems. Overnight delivery of yarn and cloth paper tubes and boards. Shows how warehousing of these items can be avoided. — TEXTILE PAPER PRODUCTS, Cedartown, Ga.

658. BEAM MULTIPLE DYEING — Information on the Morton System Horizontal Beam Dyeing machine is available. Features include minimum handling of beams and the use of a common or individual dyebath for as many as six beams. — MORTON MACHINE WORKS, 1718 Third Avenue, Columbus, Georgia.

701. MAGNESIUM APPLICATIONS — Case history information on magnesium application in the textile field, published bi-monthly with latest developments in the magnesium industry. — DOW CHEMICAL CO., Midland, Mich.

704. FUNDAMENTALS OF INDUSTRIAL WATER TREATMENT PROCESSES — 24-Page booklet entitled "If You Use Water" discusses the fundamentals of the three major classifications of industrial water treatment based on ion exchange: softening, dealkalization, and deionization. — RHOM & HAAS COMPANY, Resinous Products Div., Washington Square, Philadelphia 5, Pa.

DYESTUFFS, CHEMICALS, SOAPS . . .

705. THEORETICAL AND APPLIED SILK-SOAKING — Attractive 23-page booklet outlining methods of silk-soaking and outlining investigation on the soaking, back-winding and degumming of silk. — HART PRODUCTS CORP., 1440 Broadway, New York 18, N. Y.

710. DEPUMA — An odorless, viscous, non-evaporating emulsion which is highly efficient as an anti-foam, useful in all phases of dyeing and printing. — AMERICAN ANILINE PRODUCTS, INC., 50 Union Square, New York, N. Y.

713. LIOVATINE ED — Vat dyeing assistant increasing penetration and level dyeings with maximum yield of color. — SANDOZ CHEMICAL WORKS, 61 Van Dam St., New York City.

714. NEW SODA ASH BULLETIN — 64-page edition contains both new material and revisions of previously used data covering the subject. Ask for Bulletin No. 5. — SOLVAY SALES DIV., 40 Rector St., New York 6, N. Y.

715. AQUAROL AND ARKANSAS PRODUCTS— Bulletin on Aquarol water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and yarn, hosiery processing. — ARKANSAS CO., INC., Newark, N. J.

719. WOOL OIL — Descriptive booklet on antistatic fiber lubricant, Twitchell 7421. Performance factors given particular emphasis are static control, scourability, lubricity and resistance to yellowing. — EMERY INDUSTRIES, INC., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

720. INDUSTRIAL OIL — Bulletin catalogs all of Swift's Industrial Oil and Fatty Acid products. Included are detailed specifications, shipping information and suggested usage on products of animal, vegetable and marine sources. — SWIFT & COMPANY, Industrial Oil Department, 1800 165th Street, Hammond, Indiana.

721. SURFAX 1288 — Product data sheet explains this useful wetting and rewetting agent. Described as being water soluble at all temperatures and is a highly concentrated, economical surface active agent. — E. F. HOUGHTON & CO., 303 W. Lehigh Ave., Philadelphia, Pa.

722. RESINS & LATICES — Booklet describes chemigum, latex, pliolite latex, plivoia latex, plivoic AO and their applications. Gives properties of Goodyear Latices. — GOODYEAR CHEMICAL DIV., 1144 East Market St., Akron 16, Ohio.

727. COLOR PRINCIPLES — Booklet available from Sandoz Chemical describes the fundamental principles of color and its measurement. Booklet has been adopted by several of the leading textile schools. — SANDOZ CHEMICAL WORKS, INC., 61 Van Dam Street, New York 13, N. Y.

728. UNIQUE YARN AND DYEING SERVICE— Booklet by Franklin Process tells why Franklin Process Yarn Dyeing Service is one of the top package yarn dyeing services. Also includes table showing relative fastness of dyestuffs used on various fibers. — FRANKLIN PROCESS CO., 564 Eddy St., Providence, R. I.

729. STATIC AND STATIC CONTROL — Papers deal with historical background of static electricity and the problems caused by it along with methods of controlling them. — DEXTER CHEMICAL CORP., 819 Edgewater Road, New York 59, N. Y.

733. WOOL OILS — Twin booklets by Proctor and Gamble tell of the influence of wool oils in producing quality yarns and fabrics, and of Proctor and Gamble's Proxol T, an outstanding wool oil. — PROCTOR AND GAMBLE DIST. CO., Cincinnati, Ohio.

734. BLEACHING WITH PEROXYGEN CHEMICALS — Bleaching methods for cotton, rayon, nylon and animal fibers are comprehensively treated in Becco Research and Development Dept., Bulletin No. 52, now available. — BUFFALO ELECTRO-CHEMICAL CO., INC., Station B, Buffalo 7, New York.

745. RAPIDASE FOR DESIZING — Bulletin explaining in detail the properties and characteristics of Rapidase. — WALLERSTEIN CO., INC., 180 Madison Avenue, New York 16, N. Y.

749. WATER SOLUBLE GUMS — Booklet giving the origin, gathering, marketing and uses of water soluble gums. This booklet No. 23 is beautifully illustrated, and is one of the few treatises on the subject. — JACQUES WOLF & CO., Passaic, N. J.

753. TRITON X-100 — Boklet available describing this highly concentrated detergent and wetting agent, main uses fully discussed and chemical properties brought out. — ROHM & HAAS COMPANY, Philadelphia 5, Pa.

757. THE CHEMISTRY OF CYNANURIC CHLORIDE — Very comprehensive technical text by American Cyanamid Co. Gives Physical properties, Reaction Chart, Chemical Properties, Potential Applications, Toxicity, Table of Alcohol Reactions, Table of Amine and Related Compound Reactions. — AMERICAN CYANAMID CO., 30 Rockefeller Plaza, New York 20, New York.

766. DU PONT PEROXIDE BLEACHING SYSTEMS — New book illustrating and describing this continuous peroxide bleach system. Layouts and other information included. — E. I. DU PONT DE NEMOURS & CO., ELECTROCHEMICAL DEPT., Wilmington, Del.

769. SURFACE TENSION DEPRESSANT — The booklet, "Mercerizing and Alkamerce — The Ideal Dry" which can be used as a wetting agent; a dye leveling agent, a penetrant in package dyeing. — HART PRODUCTS CORP., 1440 Broadway, New York, N. Y.

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773. TECHNICAL CHEMICAL DATA SHEETS— Complete set for dyeing, printing and finishing operation, showing major operations, performance and advantages. — ONYX OIL & CHEMICAL CO., 190 Warren St., Jersey City 2, N. J.

774. ROYCE TEXTILE CHEMICALS — This booklet briefly describes the leading Royce products for textile processing, printing, dyeing and finishing. — ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

801. THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE — Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

808. REINER WARPER — Full width and sectional warpers for all requirements in the knitting and weaving industry fully described in recent catalog. —ROBERT REINER, INC., Weehawken, N. J.

818. FORGED LIGHT METAL BEAMS FOR EVERY APPLICATION — Catalog 45-A describing Light Metal Tricot Beams made in Standard and Special sizes plus Special Purpose Light Metal Textile Equipment. — MILTON MACHINE WORKS, INC., Milton, Pa.

KNITTING . . .

823. VARIABLE STRIPER — Booklet available describing Supreme's complete line of automatic Variable Stripers and Pattern Placer Machines. — SUPREME KNITTING MACHINE CO., INC., 105 Johnson Ave., Brooklyn 6, N. Y.

828. THE KIDDE KNITTER — Bulletin describing this newest in Raschel-type warp knitting machines and higher production attained with it. — KIDDE MANUFACTURING CO., INC., Farrand St., Bloomfield, N. J.

SEWING MACHINES . . .

924. BUTT-TACKING SEWING MACHINE — Booklet describes an operating installation of the Merrow single thread butt-tacking sewing machine. Gives performance data, and advantages of butt-tacking. — THE MERROW MACHINE COMPANY, 28 Laurel Street, Hartford, Connecticut.

925. SEWING MACHINES — The Lock-Stitch bulletin No. 258 describes and illustrates new, high speed, single needle Union Special Lock-Stitch machine for general purpose industrial sewing operations. — UNION SPECIAL MACHINE CO., 407 N. Franklin St., Chicago 10, Illinois.

MATERIALS HANDLING . . .

1000. MATERIALS HANDLING SPECIALS — Color Booklet by Kennett Equipment and Cachinery Co., describes their complete line of materials handling devices. — KENNETT EQUIPMENT AND MACHINERY CO., Kennett Square, Pa.

1003. CASTERS AND WHEELS — 192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this. — DARNELL CORP., LTD., Long Beach 4, Calif.

1006. LANE CANVAS BASKETS — 16 page illustrated booklet describing the Lane line of canvas baskets for textile use. — W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. OVERHEAD HANDLING EQUIPMENT — 56 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem. — THE AMERICAN MONORAIL CO., 13106 Athens Ave., Cleveland 7, Ohio.

1008. CASTERS AND WHEELS — An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters. — THE COLSON CORP., Elyria, Ohio.

1010. CONVEYOR KEY BOOK — A guide to produciton "step-ups" now possible with modern conveying. Shows time-and-effort savings. Well illustrated with photos showing plant layouts and sketches showing where, how and why different types of conveyors are used for maximum results. — LOGAN CO., 1115 Franklin St., Louisville, Ky.

1011. TEXTILE TRUCKS — Booklet describing doff boxes, frames and trucks, yarn, waste, platforms, conditioning, steep lap, fiber, utility trucks, etc. Uses and description. — EXCEL TEXTILE SUPPLY CO., Lincolnton, N. C.

1013. "A STORY OF TRACTOR TOOLS AND THEIR USE" — Comprehensive illustrated guide effectively present in cartoon-style the many principal uses for this type of equipment. — HYSTER CO., 2903 N. E., Clackamas St., Portland 8, Ore.

1030. CDF RECEPTACLES — This 32-page catalog, R-11, profusely illustrated in color, shows Continental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specifications are given on each item. — CONTINENTAL-DIAMOND FIBRE CO., Newark 11, Del.

1032 — ELECTRIC CHAIN HOISTS — Bulletin 852 describing Robbins & Myers Type "JC" Electric Chain Hoists. Capacities 500, 1000 and 2000 pounds. — ROBBINS & MYERS, INC., Hoist & Crane Div., Springfield, Ohio.

1102. BALING PRESSES — An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Upstroke models. — ECONOMY BALER CO., Ann Arbor, Mich.

1103. UNBRAKO SCREWS — Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data. — STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1108. FABRICATION OF U. S. STAINLESS STEELS — 136-page book covering use of stainless steel in textile equipment from cutting to cleaning. Includes corrosive-resistance tables for chemicals. — CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh, Pa.

1111. BRUSHES — A 26-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry.— GASTONIA BRUSH COMPANY, Gastonia, N. C.

1112. THE RANDOM WEB PROCESS — Bulletin No. 101 describes the Rando-Webber and Rando-Feeder machines, and discusses the origin and development of the Random Web process which produces a non-oriented web suitable for processing into felts, wadding, heavy mats and non-woven fabrics on a continuous basis. Engineering data and cut-away diagrams. — CURLATOR CORPORATION, Textile Division, 565 Blossom Rd., Rochester, N. Y.

MISCELLANEOUS . . .

1113. MACHINE KNIVES — Catalog and price sheets describing this company's line of knives for use on textile machinery. — TAYLOR-STILES & CO., 21 Bridge St., Riegelsville, N. J.

1115. TEXTILE WRAPPING MACHINES — Brochure describing automatic wrapping machines for various types of textile products, including the new Hayssen V-Type Underfold, most protective package made. — HAYSSEN MANUFACTURING CO., Sheboygan, Wisconsin.

1122. BALING PRESSES — Bulletins available describing this company's line of motor-driven and hydraulic baling-presses for finished-goods, textile fibers, wool, and waste of all kinds. — LOGEMANN BROTHERS CO., 3150 West Burleigh St., Milwaukee, Wis.

Beaming and Sewing Machine

(Continued from page 101)

When desired, the entering end of the machine is fitted with a pair of guiders.

Birch Brothers, Inc., 32 Kent St., Somerville 43, Mass.

For additional data, request item B-501, using Handy Return Card on page 187.

NEW Equipment AND MATERIALS

Other items are described on pages 97, 99, 101

Shield for Fluorescent Fixtures Brings Out Natural Color and Texture

Fluorescent light that brings out the natural color and texture of objects exposed to it is produced by a new type shield for fluorescent fixtures. Called Quantalite shield, it is made of translucent Bakelite rigid vinyl sheet printed with selected colors and formed in a diamond-shaped pattern.

Light in weight, Bakelite rigid vinyl sheet retains its color and shape, resists changes due to moisture and atmospheric conditions, and will not shatter when dropped. Its flexibility makes non-flammable Quantalite shields easy to snap in or out of fluorescent fixtures, and they can be cleaned with a damp cloth or by dipping in water.

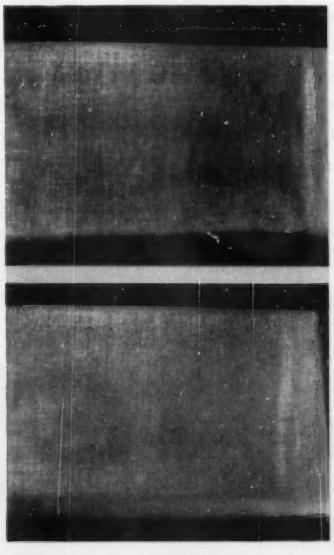
By reducing glare as well as imparting natural color balance, the shields facilitate merchandising of any product in which appearance is an important factor, such as clothing and textiles. For example, cold light from bare fluorescent tubes makes woven textiles look extra course in the glare (top photo). Transmitted through the new shield, fluorescent light brings out the true color and texture of the cloth (bottom photo). The products are thus made more attractive while reducing the possibility that they may prove disappointing when viewed outdoors or at home.

The shields are made in sizes and shapes to fit all standard fluorescent fixtures.

Plastic Illuminating Company, Inc., 101 Park Ave., New York 17, N. Y.

For additional data, request item B-502, using Handy Return Card on page 187.

Fabric in upper picture was photographed under ordinary fluorescent light; lower, with Quantalite shield on fixture (Plastic Illuminating).



Aluminum Comb Stock with Solid Blade Support for Cotton Cards

Light weight, high strength, and low cost are advantages of a new aluminum comb stock for cotton cards. The cast aluminum alloy center section provides a unit extraordinarily light in weight yet more rugged and durable than conventional steel stocks. This construction with steel end journals simplifies balancing and assures long life.

The blade is solidly supported, thus eliminating the problem of improper blade alignment and distortion between fingers.

Southern States Equipment Corp., Hampton, Ga.

For additional data, request item B-108, using Handy Return Card on page 187.

Inexpensive Combination "Pilling" and Abrasion Tester

A new combination "pilling" and abrasion tester, because of its simplicity of operation, good correlation with service results, and low cost, is ideal for general use in fabric development, mill and finishing plant control, and acceptance testing.

Known as the PA model of the Appearance-Retention Tester (pat. pending) originally developed for the U. S. Navy Clothing Supply Office, it

has shown excellent correlation with actual "pilling" and wear. Most "pilling" tests take only one to five minutes to run and are then quickly evaluated by comparison with a simple photographic standard.

Additional features of the new tester include its suitability for non-destructive testing of pilling on garments, a simple method (pat. pending) of preferentially coloring pills to make them easily visible, means for uniformly mounting samples without tension, magnetic sample holder control, an automatic timer, and reduced operating costs.

Fabric Development Tests, P. O. Box 45, Brooklyn 32, N. Y.

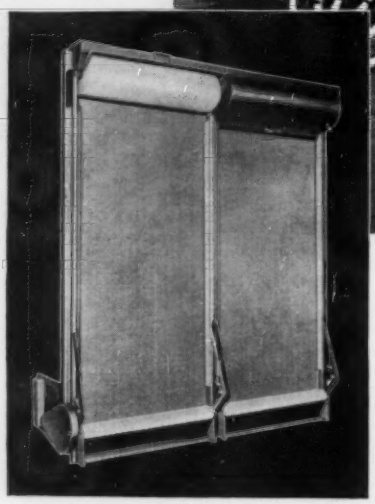
For additional data, request item B-106, using Handy Return Card on page 187.

Heavy Beamer Features Variable Speed Drive, Pneumatic Warp Compressor

Mills running wool, heavy cotton, and jute will be interested in a heavy beamer now available which features a variable speed drive and pneumatic warp compressor.

Designated Model "J", the steel-

LINT TAKES A LICKING, HERE!



Interior view at Greenville Mills showing a portion of the 96 Auto-Airmat Lint Filters cleaning recirculated air from carpet weaving operations. Compact design of filters permits overhead installation to conserve floor space.

96 AUTO-AIRMAT FILTERS Assure Lint-Free Recirculated Air at Greenville Mills

Making carpeting by the mile presents a king-size lint problem—a problem that could result in a "fouled up" air conditioning system and many costly hours of overtime maintenance. But Greenville Mills, in planning their new Greenville, Miss., plant, found the solution in the AAF Auto-Airmat—the *only* filter that solves your lint problems automatically.

The Auto-Airmat not only collects the lint but cleans itself automatically. The Airmat media, installed in roll form at top of unit, moves downward on an endless screen and is rerolled at the base with its lint load. The rate and frequency of screen travel is automatically controlled by a pressure switch. The drive mechanism starts when resistance builds up to a predetermined maximum — and stops when sufficient clean Airmat has been introduced to reduce the resistance. It's just that simple. No expensive "week-end cleaning" to keep filter at peak efficiency—and the lint is wrapped up in the roll for easy disposal!

Lint on the loose from weaving, carding and spinning rooms can be controlled effectively with big savings in maintenance. For complete Auto-Airmat data, call your local American Air Filter representative or write for Bulletin No. 234.

American Air Filter

COMPANY, INC.

275 Central Avenue, Louisville 8, Kentucky

American Air Filter of Canada, Ltd., Montreal, P. Q.

framed unit can be built to take beam heads up to any length desired or several short beams at the same time. The pneumatic cylinders insure an even pressure across the full width of the beam, thus increasing the amount of yarn that can be warped on a beam. The variable speed unit can be supplied with either manual or automatic control.

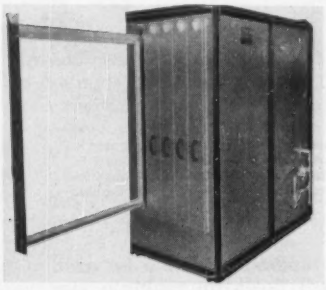
Warp Compressing Machine Co., Worcester, Mass.

For additional data, request item B-503, using Handy Return Card on page 187.

Steam Heated Swatch Dryer

Recently introduced was the Lydon Model 1422-D steam heated swatch dryer with five vertical drawers to accommodate 42" wide x 64" high maximum swatches. Normally it operates at 200 F.

Each drawer consists of an angle iron frame, having an adjustable angle that may be raised or lowered to take care of 34" to 64" long swatches. Each drawer rolls very



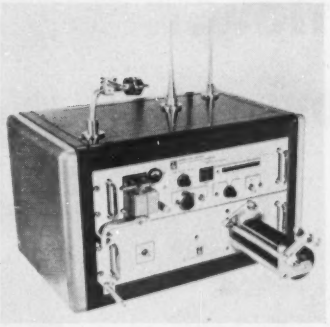
easily on ball bearings, and is provided with a stop located so that working depth is fully uncovered.

Internal up-draft air circulation system is utilized. Dampered fresh air inlet is provided on the suction side of the fan. Dampered forced air exhaust is provided on pressure side of fan and before air is passed through the steam coil.

Steam at 15 psi is required for operation.

Lydon Brothers, Inc., 85 Zabriskie St., Hackensack, N. J.

For additional data, request item B-113, using Handy Return Card on page 187.



Brush Imperfection Counter.

Yarn Imperfection Counter Eliminates Human Error

Shown in the accompanying photo is the Brush Imperfection Counter described on page 153 in TEXTILE INDUSTRIES for November, 1954. Designed in cooperation with the Institute of Textile Technology, the instrument is accurate even at speeds of 100 ypm.

A permanently positioned yarn handling mechanism accepts any size yarn package and all yarn sizes. Number of imperfections is read directly from a counter.

Brush Electronics Co., 3405 Perkins Ave., Cleveland 14, Ohio.

For additional data, request item B-105, using Handy Return Card on page 187.

Indicating Process Controller Has On-Off or Throttling Action

An indicating controller in the low price range, designated the Model 41A Pneumatic Controller, replaces the earlier Model 41, providing sharp on-off or narrow band proportional control of such variables as temperature (size storage kettles, etc.); pressure (production steam to individual equipment such as J-boxes); humidity.

When equipped for on-off action, the new controller "snaps" the control valve from fully opened to fully closed when the measurement crosses the control point, handling any process with large capacity-demand ratio and negligible lag.

For a process requiring throttling action, the Model 41A is equipped with a proportional unit adjustable from ¼ of 1% up to 25% of scale. The unit, a simplified blast feedback

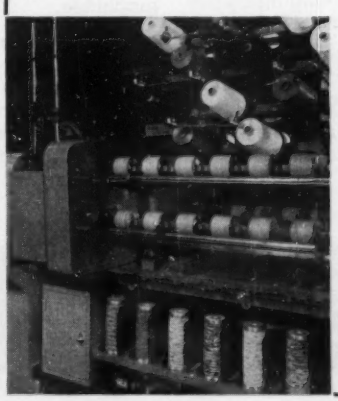
COLLINS (TWO TWISTERS IN ONE)

TWO TWISTERS IN ONE

The Collins C/B Novelty Twister with DUAL-DRIVE AND ULTROHEAD FOR ALL YARNS

The Collins C/B Novelty Twister is considered TWO TWISTERS in ONE because each side of the frame can be run independently of the other side in regard to direction of twist, speed and yarn construction. This tape-driven dual-drive arrangement affords unlimited flexibility for the production of novelty and ordinary ply yarns.

The ULTROHEAD attachment is the most advanced mechanism ever developed for producing the widest possible construction variations in Splash, Nub, Seed, Boucle', and Ratine' yarns.



The Collins C/B Novelty Twister was a star performer at Atlantic City and Greenville Shows. Today, mills are daily acclaiming its outstanding cost cutting performance and wide versatility. THERE IS A COLLINS TWISTER FOR EVERY PLY YARN CONSTRUCTION.

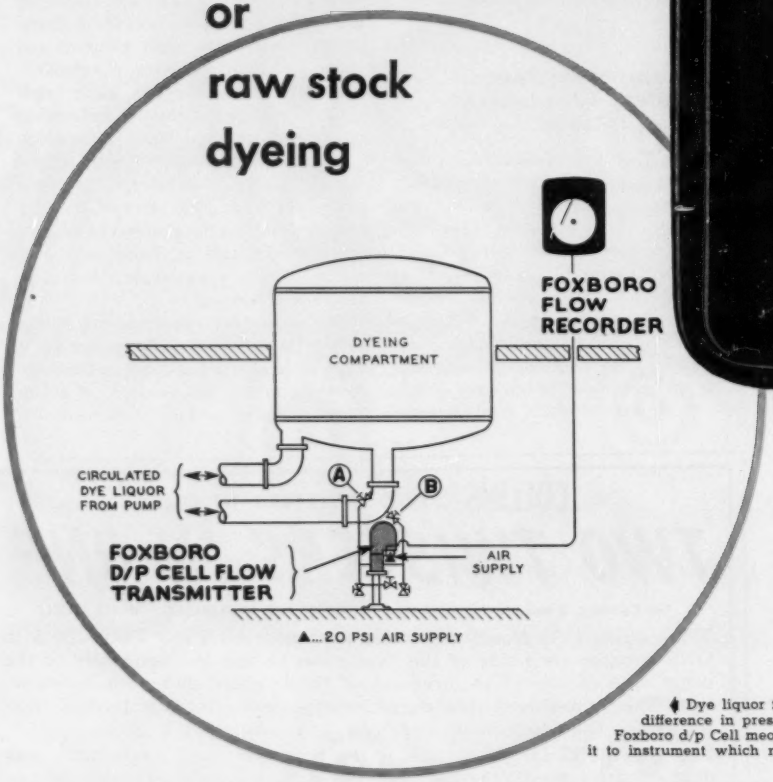
COLLINS BROS.
MACHINE COMPANY
647 Roosevelt Ave.
Pawtucket, Rhode Island

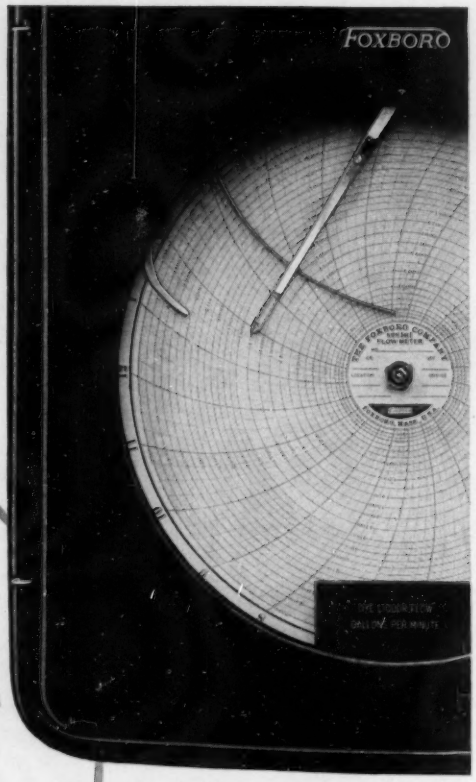
Builders of Novelty, Ply, Big Ring, Beam, Cabling, Wet, Trap, Rayon, Paper, Glass, Sample and Special Twisters for all yarns.

CHARLOTTE CHICAGO TORONTO
est. 1866

Know your flow... Reproduce flow rates

...in beam, package, or raw stock dyeing





NEW!

Fully Automatic Flow Control, *tried and proved*, now available. Send for details.

◀ Dye liquor flowing in either direction creates a difference in pressure between elbow taps A and B. Foxboro d/p Cell measures this differential and transmits it to instrument which records flow in gallons per minute.

WITH FOXBORO DYE LIQUOR FLOW MEASUREMENT you can record both outside-in and inside-out flow in your recirculating-type dyeing machines . . . *with no restriction to the flow.*

Chart record in gallons per minute makes it easy to standardize flow rates per pound of yarn in accordance with dyestuff specifications.

On beam-type machines, varying density can be compensated for with far less danger of "blowing" a beam. Method can also be used to measure individual flows on multiple kier machines.

This new Foxboro System for dye liquor flow measurement can be installed on any recirculating-type dye machine . . . normally without any modification of your equipment. For complete information, write for Engineering Data Sheet 220-52 and installation photographs.

THE FOXBORO COMPANY, 482 NEPONSET AVE., FOXBORO, MASSACHUSETTS, U.S.A.

FOXBORO REG. U. S. PAT. OFF. — **DYE LIQUOR FLOW MEASUREMENT**

FACTORIES IN THE UNITED STATES, CANADA, AND ENGLAND

proportioning mechanism, relies on air jet rather than bellows actuated "follow-up" action.

"Left-to-right" indicating scale with white-on-black numerals and graduations has been lengthened to five inches, improving readability and accuracy.

The Foxboro Co., Foxboro, Mass.

For additional data, request item B-103, using Handy Return Card on page 187.

Automatic Variable Speed Pulley

Infinitely variable speeds from a constant speed motor are possible with the new Hi-Lo automatic pulley.

By turning a handwheel on a Hi-Lo standard base, the motor assembly is moved toward or away from the driven pulley, allowing standard V-belt to run over the various pitch diameters. Movement toward the driven pulley produces the maximum speed variation, while movement away produces the minimum. The pulley was designed to compensate for changes in production schedules and variations in materials and atmospheric conditions.

Exclusive feature of Hi-Lo pulleys is the cam and cam follower assembly on the back of the pulley faces. This feature allows the pulleys to adjust automatically to maintain a given speed with large load variations while regulating belt tension and maintaining belt alignment automatically.

An additional design feature permits the pulley's face assembly to be replaced without replacing the entire pulley. Springs in the pulley serve only to keep the pulley faces in contact with the belt at all times and are not driving members, so they do not compress the belt with excessive pressure.

Equipment Engineering Co., 2853 Columbus Ave., Minneapolis 7, Minn.

For additional data, request item B-117, using Handy Return Card on page 187.

Metallic Yarn Withstands Higher Temperatures, Is Stronger

The perfected metallic yarn made with "Mylar," Du Pont's polyester film, was announced recently.

Metlon-Mylar, as it is known, is a lamination of Mylar polyester film and aluminum foil. It opens new fields where ordinary metallic yarns could not previously be used, because of its resistance to far higher temperatures in dyeing, finishing, and laundering, and its much greater strength.

Samples of fabrics utilizing Metlon-Mylar yarn; also spools of the new metallic yarn.

Metlon-Mylar will withstand higher temperatures than any other non-tarnishing metallic yarn. Fabrics containing it may be dyed at the boil. The new metallic can be dyed with most formulas, but with the variation of natural and synthetic fibers, it is suggested that experiments be made, inasmuch as it is known that acetate and azoic dyes will dye Metlon-Mylar.

The new metallic yarn launders perfectly at any temperatures used in washing machines. Fabrics containing it may also be ironed at any temperature safe for the fabric in which it is incorporated.

Exceptionally tough and strong, this yarn will not cut on itself. It may often be used without any support.

At present, Metlon-Mylar is available in gold and silver in the 1/64" and 1/32" widths. The yield is approximately 50% greater than in the regular Metlon yarn, bringing the net cost per yard of finished fabrics little, if any, higher.

Metlon Corp., 432 Fourth Ave., New York 16, N. Y.

For additional data, request item B-118, using Handy Return Card on page 187.

Are You Getting a Fair Day's Work for a Fair Day's Pay?

As Production Engineers we specialize in the utilization of

LABOR—EQUIPMENT—MATERIAL

Our list of clients reads like the Blue Book of American Manufacture, and in our files are many expressions as to our service and results accomplished, like the following:

"We have found them to be a very high type concern and are glad to recommend them to anyone interested in the type of work they sell."
A SMALL SOUTHERN HOSIERY MILL

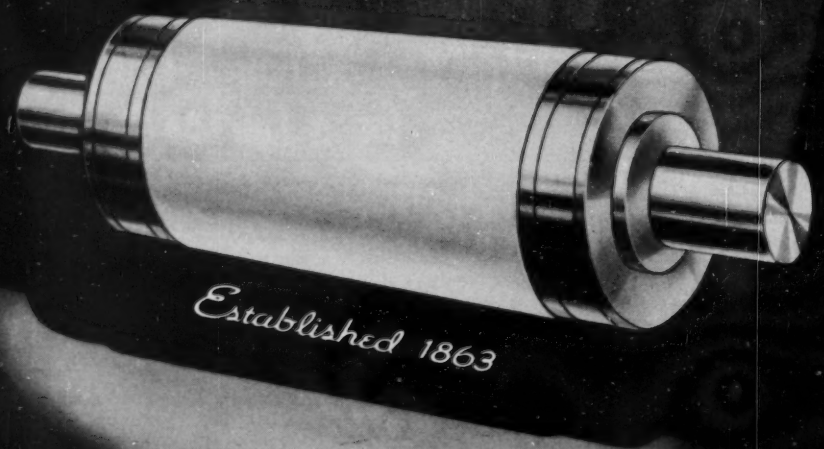
Write for a free copy of "Labor and Management Benefit by Industrial Engineering Principles," and our booklet "A Fair Day's Pay and in return A Fair Day's Work".

AMERICAN ASSOCIATED CONSULTANTS, Inc.

D. S. KEOGH, President — H. B. CRAFT, Vice President and Manager of Operations

250 PARK AVENUE, NEW YORK 17, N. Y. — GRANT BUILDING, PITTSBURGH, PA. — 30 CAMDEN ROAD, ATLANTA, GA.

"HOLYOKE" CALENDER ROLLS

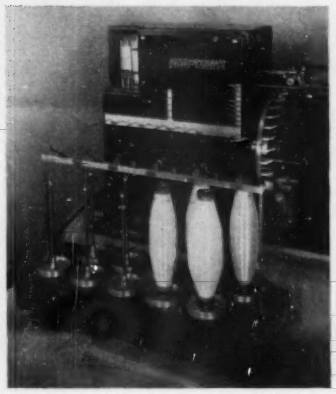


HOLYOKE MACHINE COMPANY

CALENDER ROLLS for the PAPER and TEXTILE INDUSTRIES
WATER FILTRATION EQUIPMENT
HOLYOKE, MASSACHUSETTS

New Attachments Extend Versatility of Tensile Tester

Two new attachments for the Autodinamografo, the automatic strength and elongation tester for yarns and filaments, have been developed to increase the versatility of the machine. The Autodinamografo



is an automatic single strand strength and elongation tester which tests the breaking strength of one, seven or ten bobbins. The instrument has a bobbin changer which changes automatically after five or ten tests of one bobbin. It records individual breaking strength and elongation and calculates automatically the breaking strength and elongation averages.

A twisting device is available which inserts into filament yarns approximately one twist per centimeter (2½ twists per inch) in order to avoid slipping of the yarn and obtain a perfect break without changing the characteristics of the filament. The Autodinamografo can be used with or without this twisting device.

Another new feature is a fourth scale which permits the testing of yarns and filaments up to a breaking strength of 2,500 grams (about 5½ lb).

Stellite American Corp., 60 East 42nd St., New York 17, N. Y.

For additional data, request item B-504, using Handy Return Card on page 187.

Fast-Action, Low-Cost Catalyst for Resin Finishing

Development of a fast-action, low-cost catalyst for resin finishing textiles has been announced. Designated Catalyst AC-6, the new material has a curing efficiency 20 to 25 per cent higher than other members of Monsanto's "AC" catalyst series.

Catalyst AC-6 out performs the others in terms of emboss durability, glaze retention, and wrinkle recovery. Emboss quality, tear strength, and tensile strength are approximately equal.

Other advantages of the new material are: (1) Long bath life (uniformity of resin application, minimum resin bath waste); (2) minimum danger of odor formation; (3) fuller development of optimum fabric properties (maximum performance, minimum resin add-on).

Monsanto Chemical Company, Springfield, Mass.

For additional data, request item B-505, using Handy Return Card on page 187.

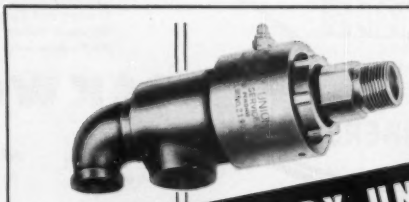
New D-C Motors Offer "Dynamic Response"

The controlled reaction of motors to the demand for a change with a "dynamic response" formerly found only in specially designed machines is the everyday standard of performance of the new Reliance Super "T" direct-current motors.

These new motors are described as producing the fastest and most accurate response ever offered in a standard design motor. Their features of ruggedness, ability to take full load and overloads, ability to change speed rapidly, ability to maintain torque and tension, and reverse and stop quickly are most significant.

The time required for these motors to accelerate to full speed has been cut to half the time that was formerly required. Lower mechanical inertia, lower electrical inertia, and higher commutating ability have been combined to achieve this new high in motor performance.

The motors are being produced in the sizes from 20 to 100 horsepower, and the range will be extended both upward and downward to higher and lower horsepowers. A complete range of mechanical enclosures has been developed to assure complete pro-



TYPE "S"
ROTARY UNION

The ROTARY UNION* is self-adjusting self-aligning

Now designed for Field Repair

The ROTARY UNION has a precision mechanical seal which uses neither packings nor springs. It is so designed that the pressure is automatically adjusted to fluctuations in the fluid pressure of the application.

ROTARY UNION contruction automatically compensates for any misalignment . . . such as due to worn threads on machine adaptors. This takes all stress and strain from moving and sealing parts and accounts for the phenomenally long service given by the ROTARY UNION on slashers, dry cans, calenders, embossers, and on printing and coating machines.

For full information contact our nearest office or write Dept. 2T for our Bulletin 700.

"Where *Good Connections* Count" ® * Trade Mark — Patented

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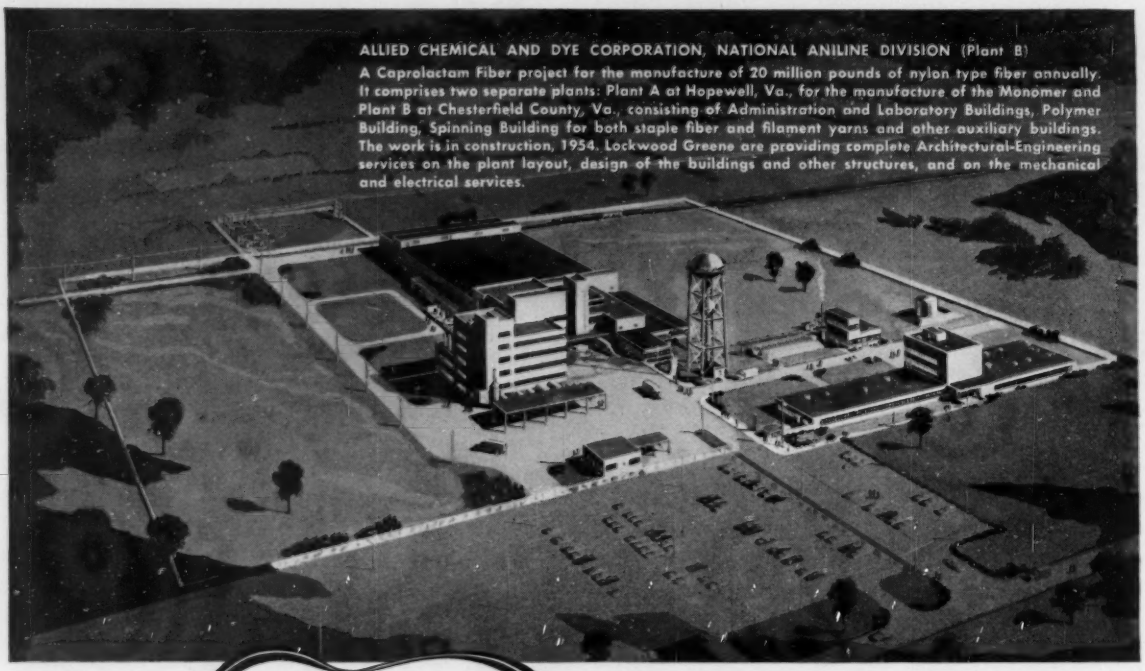


ALLIED CHEMICAL AND DYE CORPORATION, NATIONAL ANILINE DIVISION (Plant B)

A Caprolactam Fiber project for the manufacture of 20 million pounds of nylon type fiber annually. It comprises two separate plants: Plant A at Hopewell, Va., for the manufacture of the Monomer and Plant B at Chesterfield County, Va., consisting of Administration and Laboratory Buildings, Polymer Building, Spinning Building for both staple fiber and filament yarns and other auxiliary buildings. The work is in construction, 1954. Lockwood Greene are providing complete Architectural-Engineering services on the plant layout, design of the buildings and other structures, and on the mechanical and electrical services.

LOCKWOOD GREENE Projects in SYNTHETIC FIBERS

Starting with the American Bemberg Corporation plant (Div. of Beaunit Mills, Inc.) in 1925, Lockwood Greene have designed and supervised the construction of many notable synthetic fiber plants at home and abroad, including, with those shown:

American Enka Corporation, Enka, N. C.
Beaunit Mills #1 & #2, Coosa Pines, Ala.
Celanese Corp. of America, Rome, Ga.
Chemstrand Corporation, Decatur, Ala.
National Rayon Corp., Ltd., Bombay, India
North American Rayon Corp. (Div. of Beaunit Mills, Inc.)

LOCKWOOD GREENE
ARCHITECTS-ENGINEERS

BOSTON 9, MASS.
40 Central Street

NEW YORK 20, N. Y.
10 Rockefeller Plaza

SPARTANBURG, S. C.
Montgomery Building

OWENS-CORNING FIBERGLAS CORP., ANDERSON, S. C.

This 280,000 sq. ft. plant is the largest and most modern of its type in the world. Air conditioned in practically all production areas, it is believed to enjoy the most comfortable working conditions in the industry: capacity 20 million pounds per year of glass yarn.

Call MILTON for dependable BEAMS

Light Metal featuring continuous welded construction

NYLON & RUBBER YARN BEAMS

FORGED HEADS
RIGID BARRELS

Forged heat-treated aluminum alloy heads and extra heavy wall barrels designed to withstand extreme pressures of monofilament; fine denier; low-turn nylon; and rubber yarns. 13¾" and 21" diameter heads.

SECTION BEAMS

Adaptable to all makes of warpers. Cast aluminum alloy heads and extruded aluminum barrels cannot shrink, swell, splinter or distort.

STEEL BARREL
WARP BEAMS
for BROAD, NARROW FABRIC, RIBBON, VELVET AND CARPET LOOMS

BROADLOOM BEAMS

for C & K and Draper Looms

Shown above is Milton's stud construction (also made with cast iron hubs).

RIBBON LOOM BEAMS

Adjustable head with fixed shaft, or fixed head with removable shaft.

WRITE FOR FREE BULLETINS

MILTON MACHINE WORKS
INCORPORATED
DESIGNERS • ENGINEERS • MANUFACTURERS
MILTON • PENNA.

NEW Equipment AND MATERIALS

tection under every conceivable operating condition.

Reliance Electric & Engineering Co., 1088 Ivanhoe Rd., Cleveland 10, Ohio.

For additional data, request item B-122, using Handy Return Card on page 187.

Vacuum-Pressure Twist Setter Completely Automatic

Where more rapid and thorough penetration of the new synthetic and high twist yarns is required, the new Lydon Vacuum-Pressure Twist Setters will efficiently and effectively accomplish the task.

Offered in four standard sizes and eight models, the machines provide the following advantages:

Yarn is uniformly set; process is completely automatic; cycles accurately reproduced; push button starting; steam at controlled pressure and temperature injected and exhausted automatically, according to a selected processing time period; vacuum cycles to 25" maximum; complete cycle fully automatic.

Lydon Brothers, Inc., 85 Zabriskie St., Hackensack, N. J.

For additional data, request item B-114, using Handy Return Card on page 187.

Equipment Briefs

Ketosol solvent 75 is an excellent **dye carrier for Dacron fibers and blends** of Dacron with wool and viscose. It promotes uniform dyeings at temperatures as low as 180 F. Preparation of emulsion is not necessary —it is soluble in concentrations required. Low toxicity.

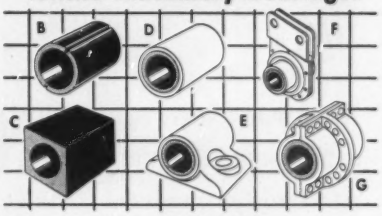
Carbide & Carbon Chemicals Co., 30 East 42nd St., New York 17, N. Y. (B-201).

A new series of **constant flow valves** maintains the rate of flow of non-abrasive fluids within one per cent up to 200, 300, 400, 500, 600, or 700 gph as desired. Each model maintains flow rates as low as 10% of maximum. Flow level may be set manually at valve or through any one of four optional remote adjusting systems specifically designed to op-

GRAPHALLOY BUSHINGS

OPERATE DRY or SUBMERGED

The IDEAL textile machinery bearings!



...self lubricating
...contain NO OIL

The GRAPHALLOY process was patented 40 years ago and the name GRAPHALLOY has been our copyrighted trademark since that time. While this company has been selling GRAPHALLÓY for the past 40 years, recent developments have added materially to its properties.

... use GRAPHALLOY BUSHINGS for TROUBLE-FREE OPERATION in the following TEXTILE equipment!

BLEACHING	DYEING	NEUTRALIZING	SOAPING
CARBONIZING	EXPANDING	PICKING	SPINNING
CONDITIONING	FINISHING	PRESSING	STEEPING
CRABBING	FULLING	SCOURING	WASHING
DECATING	GYRATING	SINGEING	WEAVING
DRYING	MERCERIZING	SLASHING	WINDING

GRAPHALLOY BUSHINGS cut TEXTILE manufacturing costs in these ways:

- ELIMINATE OIL and OILING SCHEDULES
- PREVENT OIL AND GREASE SPOTS ON FABRICS
- AVOID WEAR ON SHAFT AND BUSHING FROM LINT AND DUST GATHERED BY OIL FILM
- OPERATE WITHOUT ATTENTION IN "INACCESSIBLE" LOCATIONS
- REDUCE FIRE HAZARD
- HAVE LONG LIFE
- EXCEL WHEN SUBMERGED...AS IN WASHING, BLEACHING, DYEING, CARBONIZING
- WITHSTAND HIGH TEMPERATURE (to 700°F) AS IN DRYERS, OVENS, MANGLES, and in ROTARY STEAM JOINTS

Use our 40 years of bearing experience

GRAPHITE METALLIZING CORPORATION
1069 NEPPERHAN AVE. • Yonkers, New York
Please send GRAPHALLOY BUSHING literature and Inquiry Form 107A

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a preference based on performance

After many years of service to the Southern textile industry, Standard Oil products continue to be *first* in point of popularity. There's only one answer. To stay first your product must be *dependable*, your service *superior*. Standard Oil was first to offer special lubricants for textile machinery, and for over half a century these have been constantly improved to meet changing needs. Wherever there are moving parts—from one end of your mill to the other there are special types of Standard Oil lubricants to afford maximum protection. If you would keep your equipment running at peak efficiency and low maintenance cost, use Standard Oil lubricants.

STANDARD OIL
LUBRICANTS

The combined facilities for research, testing and engineering behind Standard Oil Lubricants are unequalled.

Standard Oil Company
(KENTUCKY)

NEW Equipment AND MATERIALS

erate in conjunction with the valve. Some applications: manual regulation of flow, automatic regulation of flow according to some variable such as temperature, and proportioning of several flows.

Askania Regulator Co., 240 E. Ontario St., Chicago 11, Ill. (B-202).

An **exterior rubberized masonry paint** that is easy to apply waterproofs the exterior while it lets water in the form of vapor pass through the film from interior to exterior, thus preventing the formation of blisters which cause paint to peel. Known as Cementhide Rubberized Masonry Paint, it is a water emulsion paint and requires no petroleum or coal tar solvents. Apply with brush, roller coater, or spray; eight colors and white; fast drying; one coat coverage on well sealed surfaces.

Pittsburgh Plate Glass Co., 632 Fort Duquesne Blvd., Pittsburgh 22, Pa. (B-203).

High ductility, high impact resistance, and high fatigue strength are outstanding features of **Steel Oilite finished machine parts and cored and solid bars** now on the market. Die-pressed of metal powders, these parts are available in a broad range of ferrous and non-ferrous metals and alloys. Physicial properties range from the equivalent of cast iron to low carbon steel.

Chrysler Corp., Amplex Div., Detroit 31, Mich. (B-205).

New Books

Now available are the *Proceedings of the 18th Annual National Time and Motion Study and Management Clinic* sponsored by the Industrial Management Society. 176 pages including charts, forms, and illustrations. Complete transcripts of talks by leaders of labor, management, and government on various topics including time study, motion economy, methods, plant layout, cost controls, wage incentives, job evaluation, and human relations. Write to Industrial Management Society, 35 East Wacker Dr., Chicago 1, Ill. Price, $5.00.

NEW U.S. ACME Combo TWISTER

3 machines combined into 1

No. 1 CONVENTIONAL UP-TWISTER

No. 2 HEADLESS PACKAGE UP-TWISTER

No. 3 WITH PERMANENT MANDRELS

• NEW SHOCK PROOF TRAVERSE MOTION

one of the "SHORT-CUT METHOD" pair

Write or phone for complete information

U.S. ACME

COMBO DOUBLE DECK TWISTER

Here is twisting versatility at its profitable best in a new, LOW COST MACHINE that's made for today's competitive, changing market!

U. S. TEXTILE MACHINE CO.
SCRANTON 8, PENNA.

Cut Rove, Sliver, or Filament Yarn into UNIFORM LENGTHS

This machine cuts rove, sliver, and continuous filament yarn into uniform lengths for subsequent blending or other processes.

●

The length of cut may be quickly varied by making adjustments using a variable speed motor or by changes of sprockets.

●

Up to 600 pounds an hour, depending on length of cut is standard.

●

Write for descriptive folder.

TAYLOR-STILES & COMPANY

204 Bridge Street Riegelsville, N. J.

not what you pay, but

WHAT DOES A BOBBIN COST?

A few cents to possibly hundreds of dollars, is the actual cost of a loom bobbin. You may pay only a few cents, and if it's a PRECISION* LOOM BOBBIN by New England Bobbin & Shuttle Company, that's the cost, too, for quite some time.

But a bobbin that doesn't run true . . . that early develops finish-scars . . . that swells due to moisture settling in the bore . . . that snags yarns — all these and many more bobbin troubles can cost many, many yards of spoiled cloth. And also, cost unnecessary operator time. THAT'S expensive, no matter what you paid for the bobbin.

PRECISION* Loom Bobbins by NEB, with the Long-Life all-over lacquer finish will, we sincerely believe, give you longer trouble-free weaving than any bobbin you can buy, at any price.

Let us send you samples

and test them yourself. Give us spindle size, or better yet, send us a true-running spindle.

*Reg. U.S. Pat. Off.

PRECISION® N·E·B BOBBINS

PRECISION® AUTOMATIC LOOM BOBBINS for Cotton and Spun Rayon, Silk and Synthetics, Woolens and Worsteds.

Precisioned to Size — Precisioned for Concentricity
Precisioned for YOUR Spindles . . .

★

NEW ENGLAND BOBBIN & SHUTTLE CO.

Makers of PRECISION® Automatic Loom Bobbins

NASHUA, NEW HAMPSHIRE

★

Representatives:

HENRY H. HERSEY, Norwood Place, Greenville, S. C.

HARRIS MFG. COMPANY, 443 Stonewall St., S. W., P. O. Box 1982, Atlanta, Ga.

H. W. CURTIS, 735 W. Crescent Ave., Allendale, N. J.

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Fiber Fineness Tests

(Continued from page 161)

"exactly 50 grains." This seems a very reasonable possibility.

The actual benefits to be derived in any particular case would, of course, depend on the physical layout for the entire routine operation of making the measurements, the type of a balance used, and so on.

Whether or not in any particular situation one is willing to accept a plus or minus 0.1 Micronaire unit depends on the practical use to which the results are to be put.

In my opinion the substance of Mr. Alberts' article is a very substantial and constructive matter, and we only regret there isn't more of this type information published; for example a further contribution could be made if Mr. Alberts would review the matter more completely, taking moisture variations into account.

J. P. ELTING
Director of Research
Kendall Mills

EDITOR TEXTILE INDUSTRIES:

We would like to comment on the article, "Speed Up Fiber Fineness Tests."

As you are aware, most Micronaire users employ these instruments as a means to an end (better cotton) and not as a basis for statistical studies.

It appears the Micronaire will tolerate small deviations in sample weight. However, in this instrument it is assumed the sample is of constant mass or weight. Obviously the sample must be weighed to obtain this value. It would appear to me that little time would be saved by weighing to less accurate standards or on less accurate balances.

The Micronaire - type instruments, of which we use the Porosity meter, give a value representing surface area called fineness. Dr. Hertel at the University of Tennessee has shown this value to be a combination of fineness and maturity.

We would like to see a fast, simple device developed to separate these two characteristics so they can be measured. It would also be desirable to obtain these readings from a single instrument.

CONTRIBUTOR NO. 8752

EDITOR TEXTILE INDUSTRIES:

Mr. J. Alberts of the Vezelinstuut T.N.O. is to be commended for his attempts to increase the rate at which routine fiber tests are performed. His article on page 185 of your September, 1954, issue describing his experiments on reducing the time required for weighing samples for Micronaire testing is most interesting.

I wonder, though, if the same result (increased weighing speed) is not obtained with the use of some form of the rapid-weighing balances now on the market.

With the Shadograph type of balance, for example, it would appear that accurate weighing to 50 grains would be almost, if not fully as rapid as: (1) weighing to a range of 2.90-3.55 gm., (2) reading the weight correctly and recording it with equal correctness, (3) determining the correction factor, and (4) then adjusting the observed Micronaire reading with no mistake in arithmetic.

For laboratories not having rapid-weighing balances, Mr. Alberts' technique, or some modification of it, could be very useful for routine work.

I hope you continue to publish this type of article on fiber testing. Every idea we can "toss into the pot" helps by that much the whole technology of cotton fiber testing.

BURT JOHNSON
Cotton Technologist
National Cotton Council of America

EDITOR TEXTILE INDUSTRIES:

The observations made by the author of the article "Speed Up Fiber Fineness Tests," with respect to Micronaire readings as influenced by sample weights, are essentially nothing new to those working in many laboratories. The influence of weight on the Micronaire readings has been examined by a goodly number of laboratories, with the thought of obtaining more information from the Mi-

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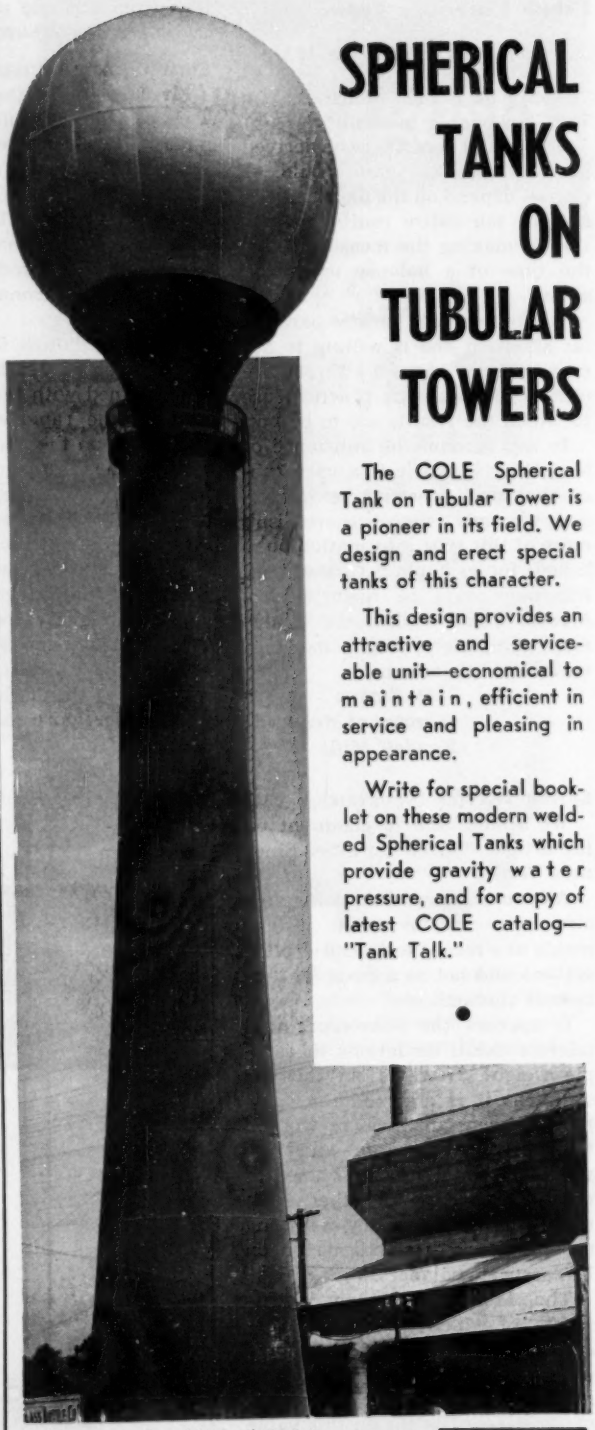

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cronaire readings of fineness.

These include studies aimed at ascertaining how much information could be obtained in regard to maturity of cottons of individual varieties as indicated by the slope of the curves obtained on using different weights of cotton so as to obtain an equivalence of different compressions.

The work reported is academic. It seems short of practical value, especially since most mills are using the curvilinear scale.

Laboratories of textile mills and other agencies are constantly striving to simplify procedures and to lower the cost of testing. Consequently, any additional steps, such as the use of correction charts or tables, would only add to the cost of testing as a greater amount of time would be required per test.

Without discussing the paper in further detail, it would not appear that any laboratory would be interested in using any correction tables. Quicker means of weighing and more rapidly adjusting the weight of the sample cotton would certainly be of more interest to them.

CONTRIBUTOR No. 8751

EDITOR TEXTILE INDUSTRIES:

The article "Speed Up Fiber Fineness Tests" is a very interesting study, and proves rather conclusively that the sample weights for the Micronaire are possibly not as important as some people may have felt in the past.

As you know, when using the Shadograph, it is such a simple matter to get accurate weighings that actually more time would be involved in using the correction factors than in weighing the original sample.

The work is very interesting to the technician, but in view of our testing techniques I do not believe it would have any practical application in our fiber testing or quality control laboratories.

CONTRIBUTOR No. 8753

EDITOR TEXTILE INDUSTRIES:

In routine laboratory testing, replicate specimens can be weighed in fifteen seconds, and results will not deviate ±0.1 mg. This testing error involves actual differences in specimens or their preparation, as well as inaccuracies in weighing.

Accuracy in weighing affects density as well as volume and, therefore, compliance with standard weight is recommended.

Considering the small testing error and quickness of adjusting specimen size to standard weight, correction equations or graphs seem unwarranted.

We have found that a balance along the lines of the Shadograph is very well suited to this type of testing.

MARY JO WESSON
Processing Department
Research Division
West Point Manufacturing Co.

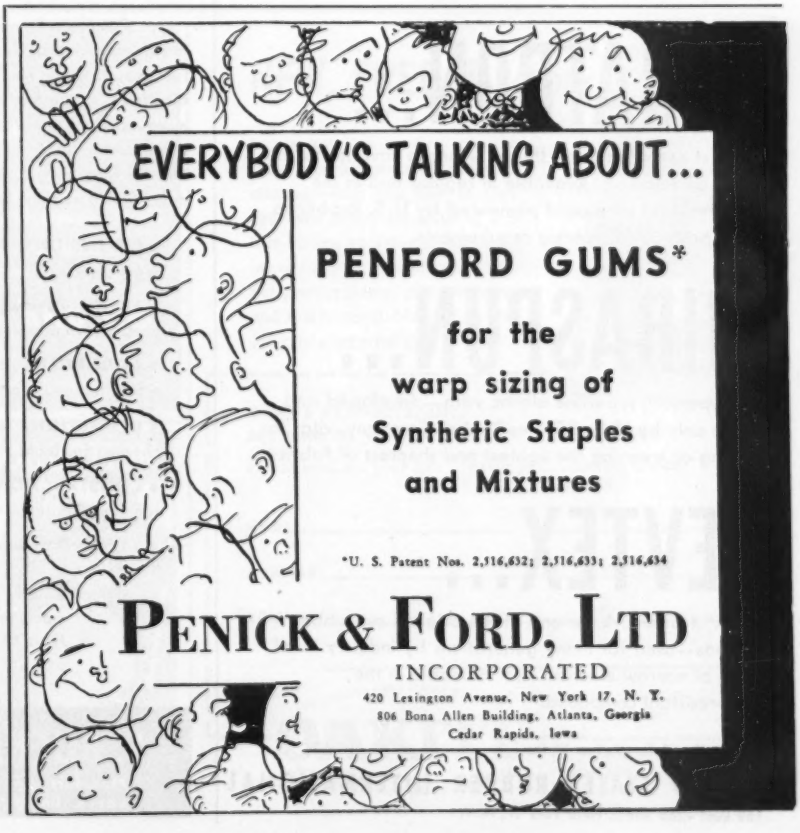
EDITOR TEXTILE INDUSTRIES:

I have read the article "Speed Up Fiber Fineness Tests," and to me the idea seems good. Several years ago, in our own laboratory, we worked out a similar system of correcting for sample weight, and ran enough tests to prove that the accuracy of results was not affected.

However, at that time we were using the familiar grain scale, and found that the time required to determine the exact weight of a sample was almost as much as to adjust the sample to the specified weight, and did not think the time saved justified the risk of an error in reading the conversion chart. We already had so many conversion charts and correction tables in use for various purposes that we hesitated to add another one.

We have no doubt that with a quick-reading torsion balance, of which there are several types on the market, the saving of time would be considerable, and where one or more operators spend most of their time making fineness tests, they would soon become familiar with the use of the correction chart and the risk of error would be reduced.

A better form for the use of this correction might be a table with sample weights at the heads of about a dozen columns and



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Micronaire readings down the side. Then the operator would merely find the corrected reading at the intersection of the horizontal and vertical rows of figures.

E. W. S. CALKINS
U. S. Rubber Co.

EDITOR TEXTILE INDUSTRIES:

I have studied the article "Speed Up Fiber Fineness Tests," and, in my opinion, if you were to use the method proposed the time involved would be greater than weighing the sample accurately to begin with.

If the method with no correction were to be used, it would possibly speed up the weighing, but would enter a greater tolerance in the test, and I am not in favor of this.

As you probably know, we have been spending a lot of time and money in an effort to get all laboratories to read on the same level, with a minimum of variation. Inaccurate weights would certainly enlarge the differences in laboratories.

This method of running the Micronaire might prove satisfactory in an individual plant, but would not be satisfactory when results were compared with others.

J. N. LITTLE
Anderson, Clayton & Co.

News in Brief

(Continued from page 91)

research project on dyes, mordants, bleaches, and printing has been completed by Mrs. Dorothy M. Crosland, director of libraries at Georgia Institute of Technology, Atlanta, assisted by W. H. Cady of U. S. Finishing Co., for the American Chemical Society. The report will be printed as part of the Society's "Advances in Chemistry" series.

New Building at BDTI. The Leslie B. Coombs Science Hall at Bradford Durfee Technical Institute, Fall River, Mass., has been formally dedicated as a part of the Institute's 50th anniversary celebration.

Quotes on the Tariff. A reduction in the U. S. tariff on wool blankets "would put Japan in the blanket business all right but it would put our mills out of it."—James J. Dugan, president, John T. Lodge & Co., Inc., Watertown, Mass. * * * "... these Far Eastern imports [are] an economic boobytrap, benefiting no one, yet resulting in the futile sacrifice of U. S. textile and apparel employees and workers in related industries."—W. Ray Bell, president, Association of Cotton Textile Merchants of New York. * * * The solution to Japanese competition does not lie alone in higher tariffs, but will depend on the development of more productive machinery and the introduction of the techniques of automation in our mills.—M. E. Campbell, dean, School of Textiles, N. C. State College. * * * In 1954, Canadian industry supplied only about 52 per cent of the Canadian market for cotton fabric compared with an average of 72 per cent prewar. Principal reason for this was a vast increase in imports from the

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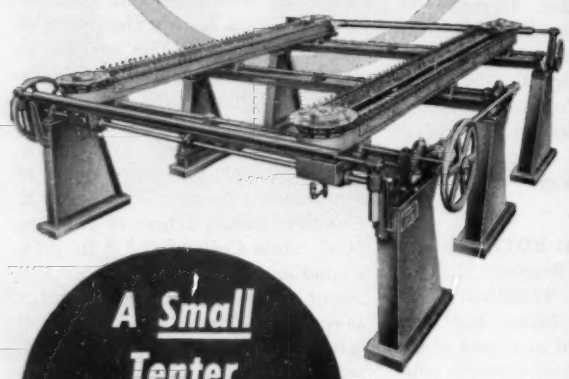

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United States where a huge domestic market enabled U. S. producers to turn out textiles at a unit cost much lower than was possible for Canadian producers.—H. Roy Crabtree, president, Cotton Institute of Canada.

MERCHANDISING NOTES

Chemstrand Corp. has made an arrangement with Nicholas T. Sekers, well-known English fabric designer, whereby his ideas will be made available to American mills to whom the Chemstrand Corp. supplies Acrilan and nylon.

Cone Mills Inc. has introduced a line of woven stripe corduroy in pinwale construction, called "Vari-Wale."

Indian Head Mills' president James E. Robison expects the solution to distribution problems to be a basic element in profitable finished goods operations in the textile industry during the next five to ten years.

Cyril Lord Inc. will handle U. S. distribution of "Taiho," 100 per cent acetate monofilament-multifilament slub yarn fabric produced in England by Cyril Lord Ltd.

Metlon Corp. has developed a two-tone metallic yarn, silver on one side and with a choice of several colors on the other.

SUPPLIERS News
WHAT THEY ARE DOING

(Continued from page 62)

branch office of **Corn Products Sales Co.**

New treasurer of the **Curtis and Marble Machine Co.** is Walter E. Hildick, former vice-president of U. S. Finishing Co.

Dudley - Anderson - Yutzy, public relations firm whose accounts include Textile Information Service, has moved to new offices at 551 Fifth Ave., New York 17, N. Y.

Eastman Machine Co. has moved its New York office to 315 West 35th St. Sol Redlich is newly appointed sales manager of the office.

N. T. Gates Co. has moved to its own recently completed building in Camden, N. J.

Durkee-Atwood Co. has announced appointment of Roy M. Spilman as

Mr. Spilman

sales manager of its industrial division.

New Appointments announced at the textile fibers department of the **Du Pont Co.:** Lester S. Sinness, general director of sales; Thomas H. Urmston and Joseph A. Dallas, assistant general directors; Henry C. Froehling, director of the newly created merchandising division; and Ford B. Draper, director of sales. Alexander D. Irving II has been ap-

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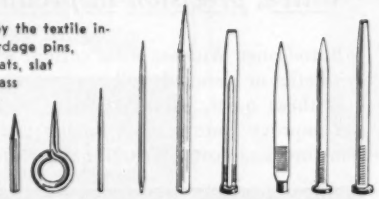

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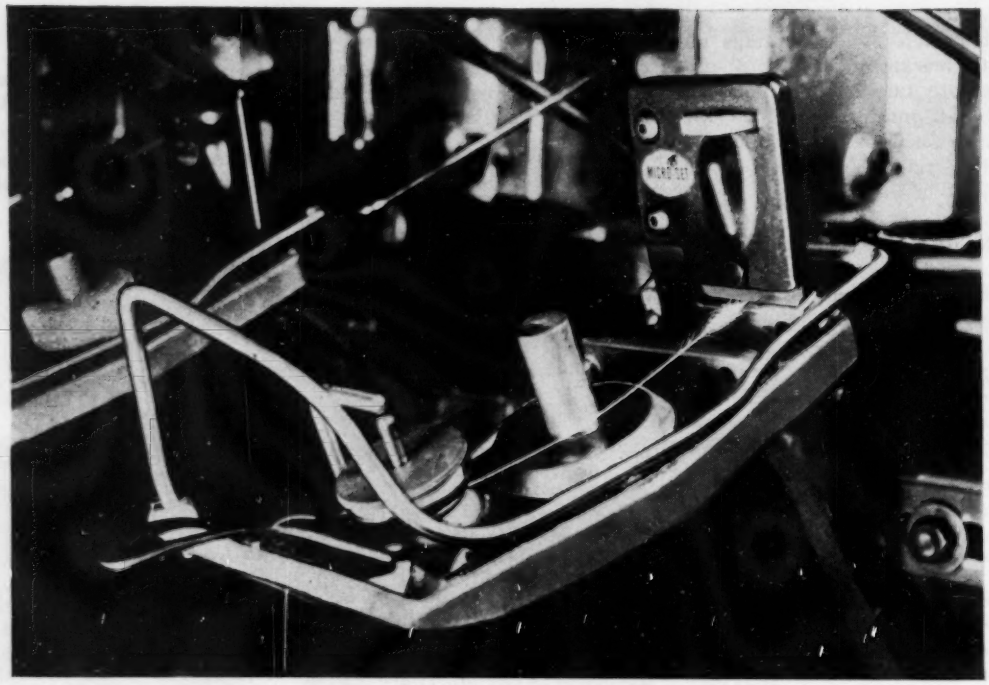

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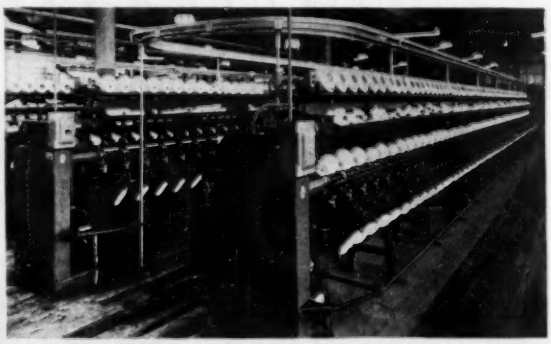

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SUPPLIERS News
WHAT THEY ARE DOING

pointed sales manager for Orlon in New York; he is succeeded as district sales manager for Orlon in Charlotte, N. C., by John C. Thompson. New district manager for acetate sales in New York is James E. Bell, Jr., replacing William B. Harman, who becomes assistant manager of acetate sales at Wilmington, Del. Stuart P. Jones becomes district sales manger for acetate in Philadelphia, replacing Mr. Bell. * * * A new laboratory for research on pigment colors has been completed by the company at its Newark (N.J.) pigments plant.

Hope Cranford has been appointed regional sales engineer for **Truscon Laboratories,** covering North and South Carolina.

Two southern sales representatives have been appointed by **James Hunter Machine Co.** and its subsidiary, **Hunter Controls, Inc.:** L. V. Neese will represent the parent company, and Carl Endlein will represent Hunter Controls.

Donald S. Black has been appointed to the sales service section of the chemical division, **Goodyear Tire & Rubber Co.,** to handle technical sales service of rubbers and rubber reinforcing resins.

Mr. Black

Dr. Robert Reiner has relinquished active management of **Robert Reiner, Inc.,** to Fritz Lambach, executive vice-president. The move was made for health reasons.

The **H. F. Livermore Corporation** has announced the appointment of Ernest W. Fanning as its southern sales manager. Mr. Fanning, who has been with the company for 33 years, will make his headquarters in Greenville, S. C., where Livermore maintains a distribution branch. Mr. Fanning's principal function will be to give greater personalized service to all the southern textile mills. In addition, he will support the selling activities of the Livermore salesmen in the field.

Mr. Fanning

The facilities of the warehouse division of **Atlantic Steel Co.** will be increased 50 per cent on completion of a new 37,800-sq ft bay now under construction.

Barnes Textile Associates has announced that Jan Verschoor, U. S. representative of Raadgevend Bureau Berenschot, Amsterdam, Holland, will be temporarily associated with Barnes in the planning and preparation of programs for improved craft training of textile operatives.

New field service men for **Brush Electronics Co.** are Harry R. Ken-

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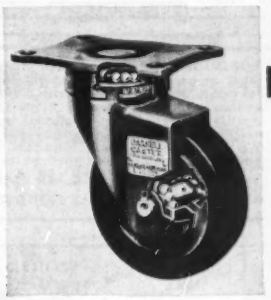

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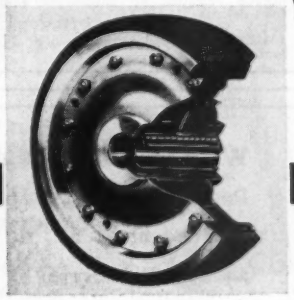

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SUPPLIERS News
WHAT THEY ARE DOING

nedy and Felton B. Bailey. They will work out of the company's southeastern sales and service office, Greenville, S. C.

Arnold I. Holmes has been named

Mr. Holmes

assistant to the general sales manager of the **Pittsburgh Corning Corp.**

The Philadelphia plant and office facilities of the Fielden Instrument Division of **Robertshaw-Fulton Controls Co.** have been expanded to three times their former area. * * * The division has established an engineering and technical service office at 2901 Clark Ave., St. Louis, Mo., to serve the central states. * * * Fillo Sales and Engineering Co. has been appointed manufacturer's representative in St. Louis.

National Aniline Division, Allied Chemical & Dye Corp., has appointed Robert E. Ellsworth promotion and advertising manager of its fiber sales and service division.

New officers at **Reed-Prentice Corp.,** recently acquired subsidiary of Package Machinery Co.: Roe S. Clark, board chiarman; Roger L. Putnam, president; and Frederick W. McIntyre, Jr., vice-president.

David W. Stapleton has been ap-

Mr. Stapleton

pointed executive vice-president of **Stowe-Woodward, Inc.**

An Executive Views the News in Textiles

(Continued from page 95)

two other nations: "Here is a long list of items upon which we will consider making tariff reductions. We want very badly to give you *something,* and here are some of the things we are thinking about giving you."

Where is the list of things we are asking *for?* There must be such a list, because certainly no horse trader would go into a gigantic, international negotiation like this without specifying what he *wants.* Do the other thirty-two nations list ahead of time what they are considering giving America? It may be that they do, but we have never seen their lists.

Will some kind reader send us the list of concessions the United States is asking for from other countries, and also the list of concessions these other countries are considering making to us?

That is all we want for Christmas, 1955.

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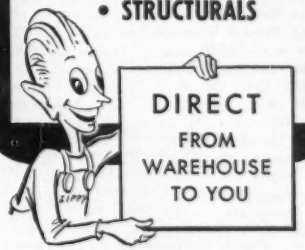

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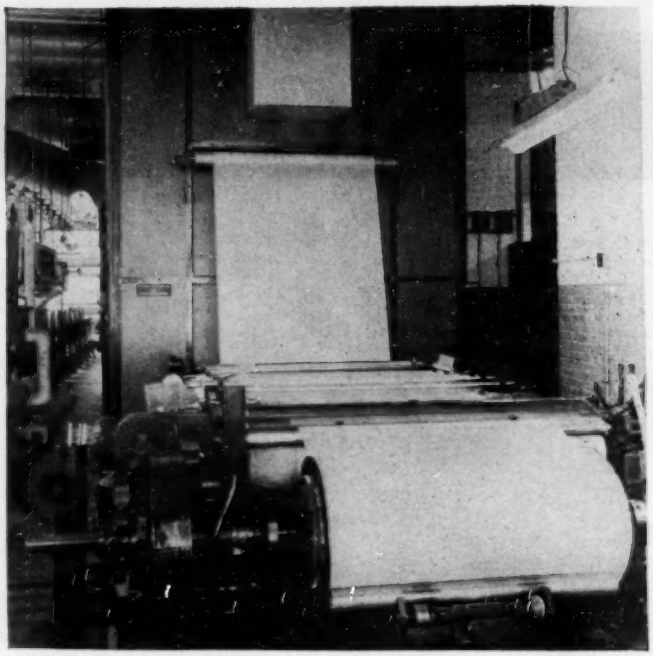

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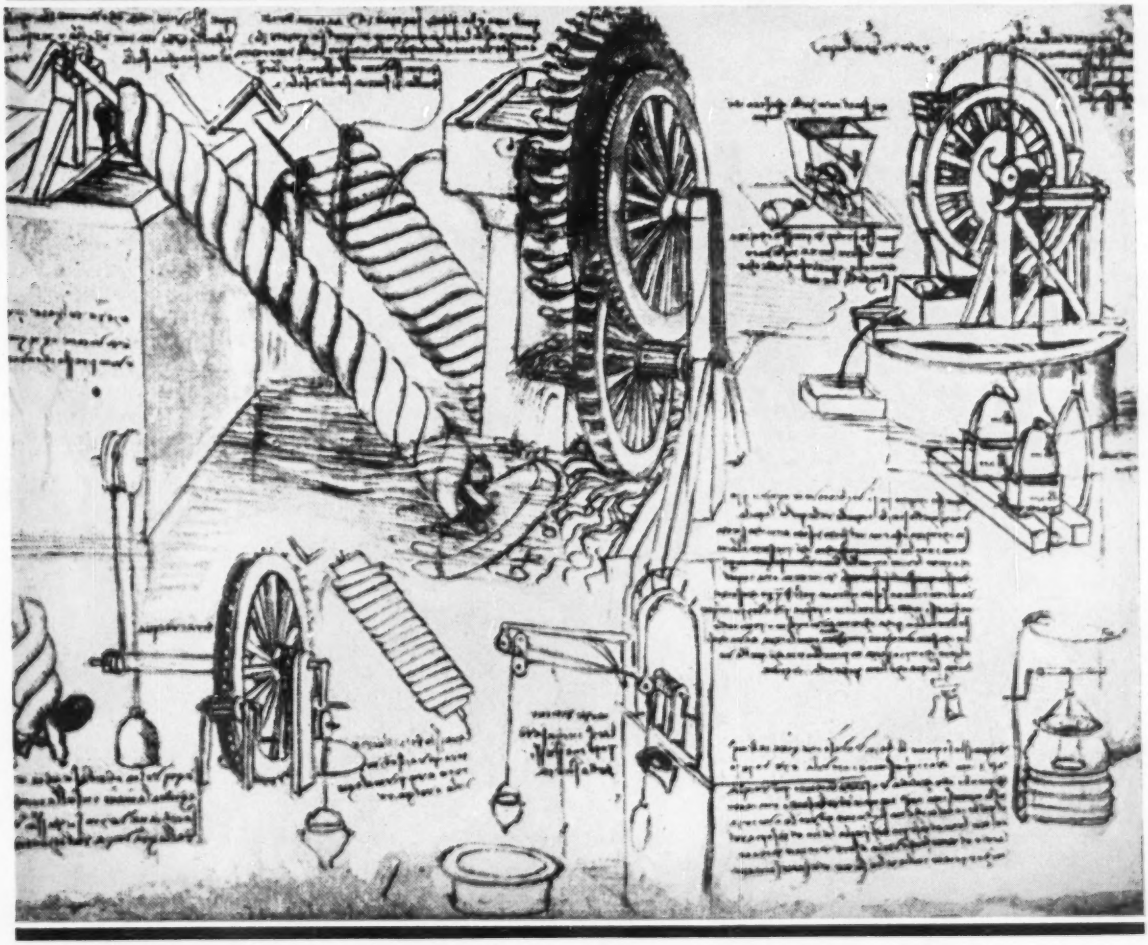

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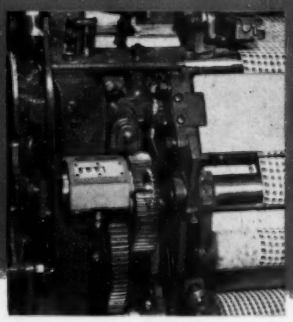
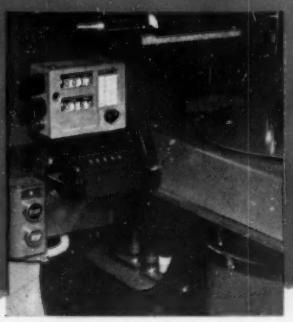


Cut Meter on Loom



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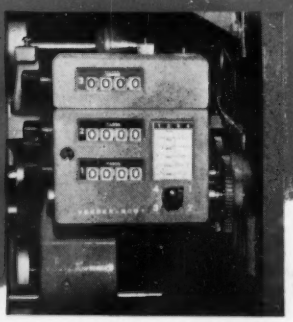

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